

# BUSINESS WEEK

YEAR  
AGO

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AGO

START  
OF  
WAR  
1939



BUSINESS  
WEEK  
EX

TWENTY CENTS • PUBLISHED BY THE McGRAW-HILL PUBLISHING COMPANY, INC.

# "Somebody else, not me"

"RAISE my wages, cut my hours, but keep down the prices of what I buy." In other words, "Let everybody else contribute to me, but I won't contribute to anyone".

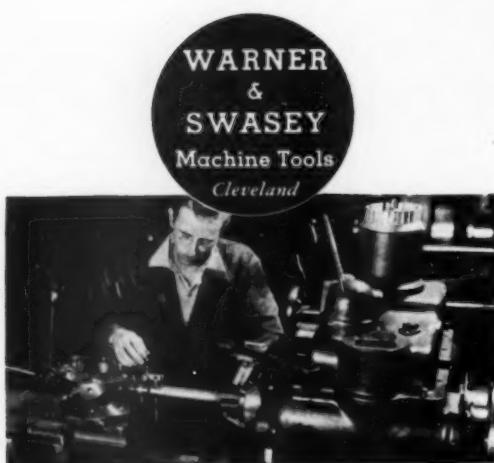
Since wages are the largest factor in the price of everything, how can you raise wage rates (or cut hours and maintain pay, which has the same effect) without raising prices?

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**Edison**  
ALKALINE BATTERIES

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# WASHINGTON BULLETIN

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## ROUGH AND TUMBLE

Reconversion will move ahead faster than most people expect (page 15)—but all thanks to Washington.

The lack of adequate, over-all planning for the transition to peace has been thoroughly publicized, most notably when the Mead committee delivered its recent blunt warning (BW-Jun. 30'45,p5). In swift succession came the atomic bomb and Russia's entry into the war. Washington was stung into activity—but too late to give industry a good sendoff.

Vital reconversion price and wage policies (page 98) are still lacking. The surplus disposal operation has been kept short. Consequently a rough and tumble period lies ahead.

## Half War and Half Peace

Nobody has to look far to find the reasons for the present chaotic situation. After V-E Day, May 8, Washington generally thought there was plenty of time to ease the adjustment of the country's economy to peacetime conditions; but V-J Day came too soon, during the one-war period, when advance planning might have facilitated the transition, a sense of urgency was lacking, and there was no firm direction policy, partly because Truman had not yet completed his top staff organization. Partial curtailment of war production, though substantial, created problems of its own. Industrial management and labor floundered in a state of half war and half peace. The WPB felt that it had neither authority nor responsibility really to expedite reconversion.

Many controls were rapidly lifted, but most manufacturers were left to scramble for materials with which to resume expand civilian production, while many were still carrying on war work.

## The Job: To Meet Competition

Now industry has one job and it knows what it is—beat competition. Manufacturers will raise the dicker about reconversion pricing. They are certain to get more rope, but so great will be the desire to place brand names in the market, get back to regular business, that most of them will produce regardless of what the government does.

## CONGRESS UNLIMBERS

Congress has been prodded into action, but what it does, or doesn't do, is not a controlling factor at this time.

Committee work will begin next week, two weeks ahead of the assembly of Senate and House Sept. 5. The Senate Banking Committee will resume hearings Aug. 21 on the Murray full employment bill, but whatever its eventual fate, this scheme can play no part in the present situation.

The House Ways & Means Committee on Aug. 27 and the Senate Finance Committee on Aug. 29 will start hearings on raising unemployment compensation to discharged war workers to a maximum of \$25 a week for up to 26 weeks. This is only a palliative, but it and Truman's companion proposal to lift the national minimum wage, now 40¢ an hour, to 55¢ or more are the only measures now on the slate that will have any immediate practical effect as regards labor. Provision also will be made for continued operation of the U. S. Employment Service.

## Tax Relief Bill Coming Up

Consideration will be given to revamping the Surplus Property Act shortly after Congress convenes. This is urgent, since efficient administration of the huge surplus disposal operation must wait until it has passed.

Another tax relief bill will follow the unemployment compensation bill through the House Ways & Means Committee. This will emphasize a reduction in the tax burden of business rather than of individuals.

Appropriations will be made to carry already authorized public roads, and rivers and harbors programs into action. Huge airport and housing construction bills are pending.

Congress probably will take a hand in the liquidation of wartime government agencies (page 7) if Truman doesn't act first, but it will probably be some time before it considers his request for continuing authority to reorganize the executive establishment.

## REFLECTIONS ON THE WAR

• **Total War**—War has come out of uniform. That was horribly demonstrated both in Europe and in Japan. If there's another war, the front will be the safest place to be—if there is a front.

• **Public Relations**—The War Dept. bungled its public relations, oftentimes arousing resentment rather than inspiring civilian war workers and the public generally. A big reason was failure to realize that the funnies, cigarettes, nylons are important—and more in the

immediate consciousness of most people than the high patriotic principles that Under Secretary of War Robert P. Patterson talked about.

• **Atomic Bomb**—All present concepts of warfare have been eradicated by the debut of the atomic bomb. Big Navy advocates, for example, will have tough going when confronted with the fact that the release of nuclear heat is utterly destructive of steel (page 21).

• **Poison Gas**—The dominant reason why it wasn't used by either side was that when conditions favored its use it wasn't needed. And when it was needed, it couldn't be used. At Iwo Jima and Okinawa gas would have driven the Japanese out of their caves in a hurry, but reprisals against American prisoners were feared.

## ACHESON VS. GREW

Dean Acheson, Assistant Secretary of State in charge of congressional relations and international conferences, resigned during the peace negotiations with Japan because he disagreed with Joseph C. Grew, Under Secretary of State and former U. S. Ambassador to Tokyo, who counseled acceptance of the condition in the Japanese surrender offer. Acheson, who intended to resign later in the summer, opposed both acceptance of the Emperor and the dilution of "unconditional surrender."

Acheson's departure from the State Dept. is the first of a series that will follow as soon as Secretary of State James F. Byrnes can turn his attention to administrative affairs. Grew's new influence in Japanese policy may mean his retention as Under Secretary, although earlier he had been ticketed for dismissal (BW-Jun. 30'45,p5).

Byrnes has received the Budget Bureau's recommendations for organization changes in the State Dept., and for establishment of an improved system of coordination between State, Army, and Navy in the development of foreign policy.

## CLAMPING DOWN ON DRAFT

The prospect is that Congress will terminate the Selective Training & Service Act before the end of this year, unless an earlier date is fixed by presidential proclamation. Otherwise, by statute the act would remain effective until May 15, 1946.

Congressional debate on the subject



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# WASHINGTON BULLETIN (Continued)

be tied closely to the controversy over compulsory military training. The Army will have a hard time selling a wartime training program to Congress. It never had more than a thin chance, and now many congressmen believe that the development of the atomic bomb has blown to smithereens previous conceptions of military force.

The probability is that Congress will promise by increasing the size of

the standing Army and Navy, expanding officer training at West Point and Annapolis, and reserve officer training in schools and colleges. Possibly summertime training for youths will also be inaugurated.

The immediate reduction in draft calls—from 80,000 to 50,000 a month—is only a stopgap until Congress can take hold of the issue. Armies of occupation in Europe and Asia are estimated to require no more than 1,500,000

men. Replacements for these probably could be raised by volunteer enlistments, thereby obtaining mature men than the 60,000 who turn 18 each month.

## CUTBACK REVIEWS ENDED

WPB's Production Readjustment Committee, set up to review cutbacks under a delegation of authority from

## Unwinding the Emergency War Agencies

Liquidation of government wartime agencies will be well under way by the end of the year. Those whose functions were wholly devoted to expediting the war program, such as the War Manpower Commission, Petroleum Administration for War, the Office of Defense Transportation, War Shipping Administration, the Office of Scientific Research & Development, were subject to quick termination as soon as peace came. The Office of Censorship was the first of these to go.

• Some Still Useful—Other agencies will be continued in operation by the President as long as they have useful work to perform in the reconversion period, or until the basic laws which brought them into being expire or are altered by Congress. In some instances, the official expiration date is fixed at six months after the end of the war as officially proclaimed by the President.

The War Production Board expects to be out of the trenches by Christmas. By that time it will have delivered whatever impetus it can to industrial reconversion by manipulation of priorities and allocation of materials. The Office of Contract Settlement, with no statutory expiration date, will continue as long as needed.

• Inflation Threat—The task of the Office of War Mobilization & Reconversion will be concentrated in the next few months, but its statutory life extends until June 30, 1947.

The Administration will continue to maintain a checkrein on inflation—although there's a question of how tightly—and hence it will continue the Office of Economic Stabilization and Office of Price Administration for several months. Although created by presidential order, the two

agencies have statutory powers over wages, prices, and rents which do not expire until the termination of the Stabilization Act on June 30, 1946. There's not much doubt that they will go out of the window then, as dead as the Office of Civilian Defense, abolished July 1.

• Labor Board Needed—An attempt may be made to prop up the National War Labor Board (page 98) until a new instrument for curbing industrial strife is contrived. The board's powers stem from the War Labor Disputes Act, which lasts for six months after the war unless Congress acts in the interim.

The Fair Employment Practice Committee, which had its birth in the war, probably will survive for another year at least.

The Foreign Economic Administration, the Office of Strategic Services, and the Office of War Information probably will be utilized in the occupation of Germany and Japan.

• Lend-Lease Dies—The Lend-Lease Act expires by statutory limitation June 30, 1946, and will not be extended.

The Surplus Property Board may be liquidated by Congress this fall in favor of a single administrator, but disposal of war surplus will continue for years under one agency or another. The present act provides for continuance of the board until three years after the war's end.

The Alien Property Custodian will continue to operate under the Trading With the Enemy Act of 1917, as amended Dec. 18, 1941, until the peace treaties are ratified, and certain administrative and litigatory work probably won't be cleaned up for years after that. Eventually, APC

functions will probably be turned over to the Dept. of Justice.

• Consolidations—The Smaller War Plants Corp., set up by statute June 11, 1942, will automatically terminate Dec. 31, 1946. Prior to that time its activities are likely to be absorbed by the Commerce Dept.

The Office of Inter-American Affairs, created by executive order July 28, 1941, probably will continue into next year. It's likely then that its functions will be absorbed by the State Dept. and certain other agencies.

The National Housing Agency, established by statute Dec. 18, 1941, will expire six months after the war, but will probably be extended in some form to coordinate the government's postwar housing activities.

• War Powers—Of the two war powers acts which formed the keystone of the extraordinary authority exercised by the federal government in the conduct of the war, circumstances are likely to require retention only of certain provisions of the second.

The first War Powers Act, approved Dec. 18, 1941, gave the President a free hand until six months following "termination of the war" to redistribute the executive functions of the government, amended the Trading With the Enemy Act of 1917 with reference to the seizure of alien property, imposed war censorship.

The second War Powers Act permitted requisition of privately owned tools, granted powers to condemn property, authorized procurement agencies and WPB to inspect the plant and audit books of any prime or subcontractor, carried penalties for violations of priorities.

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the Office of War Mobilization & Reconversion, has been put out of business by John W. Snyder.

The action is logical. So long as there was a choice between emptying this plant or that in a given cutback, PRC was a neat device for figuring which course would do the most good for reconversion.

But V-J Day cuts are so large (page 15) that the element of choice is the exception rather than the rule; besides, PRC just isn't geared to absorb the avalanche of V-J volume. So the respective procurement agencies are now handling cutbacks directly.

## REPORT ON HOME FRONT

The Combined Production & Resources Board, an outgrowth of the Atlantic Charter conference back in 1942, is nearing completion of a comprehensive study of wartime living standards among civilians in the United States, Canada, and the United Kingdom.

The study tells how—and explains why—civilian consumption changed in each of the three countries as they made their particular contribution of materials, manpower, facilities, and munitions to the combined war effort.

CPRB officials in Washington, London, and Ottawa are putting final touches on the study but a release date has not been fixed.

## CAPITAL GAINS (AND LOSSES)

Japan's defeat ends her claim to 15% of the profits from the Pribilof Island fur seal herd which, under U. S. care and breeding, increased from 120,000 animals to 3,155,000 in 35 years. Dissatisfied with her share, Japan in 1941 denounced the treaty governing the killing of seals.

The Navy has begun rescheduling ship deliveries so as to cushion yards and workers from the shock of last week's \$1,200,000,000 cutback.

The Army is canceling all orders for "K" rations.

WP Chairman J. A. Krug, reported as resigning his job, is now resigned to continuing it—on President Truman's insistence that the old hands at government-industry liaison are best qualified to guide reconversion.

—Business Week's  
Washington Bureau

## THE COVER

The Big Three flags that waved for V-E Day on Business Week's May 5 cover fly again in final triumph.



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# THE OUTLOOK

BUSINESS WEEK  
AUGUST 18, 1945



**Reconversion**—Heavy industry is ready and will swing from war to peace production faster than has been expected.

There never has been any question about demand for its products. The problem was whether reconversion could get moving fast enough to prevent a tailspin. The way things look now, it can (page 15).

Demand for capital goods is large, and industry has accumulated the money to fill its needs. Government expenditures will drop but will nevertheless continue high. And while national income may decline as much as 20% by the year end, consumers still have high wages and savings to help maintain their rate of spending.

It adds up to the prospect that business, by the year end, will hit approximately the rate of 1941—160 or better in the Business Week Index, 46,000,000 jobs, and not over 6,000,000 unemployed.

**Labor Relations**—Reconversion is going to be turbulent enough without labor strife. The Administration wants to guide the country to a high-employment economy. Beyond that, it has its eyes on 1946 and 1948.

Achieving these ends—and also avoiding inflation—will require an adroit but also a firm policy and an able administrator.

The first requisite is for Washington to talk the unions into accepting peaceful processes. This presumably would mean some substitute for the Little Steel formula, whether it is administered by the National War Labor Board or not (page 98).

Probably the plan will be to permit bargaining for higher hourly wages to compensate in part for lost overtime and downgrading in exchange for a promise from union leaders to bar rash demands.

If the substitute formula is reasonable, management in many reconverting industries may be able to see its way clear to grant some increases in order to get rolling again rather than risk a slow start through strikes.

All this will lead to higher costs and more battles with OPA over prices, but there is a good chance that it will avert paralyzing stoppages.

**Manpower**—Authoritative but unofficial predictions are that the labor force at the year end will number 62,000,000, and that there will be 46,000,000 jobs, 10,000,000 men still in the armed forces, and 6,000,000 unemployed. (For comparative purposes, the end of 1944 saw a labor force of 65,000,000, 51,000,000 jobs, 12,000,000 under arms, and 1,000,000 unemployed.)

With 46,000,000 employed and 6,000,000 out of jobs at the turn of the year, we would weather the critical reconversion period at a level not far from that characterizing 1941, a fairly satisfactory year.

To fall very far below 46,000,000 jobs, however, might reflect the beginning of a deflationary spiral. That peril is implicit in the wiping out of some 7,750,000 munitions jobs and the demobilization of the armed forces.

**Demobilization**—Of an Army numbering over 8,000,000, about half are still overseas despite the return to date of a million from Europe.

When President Truman says that between 5,000,000 and 5,500,000 will be discharged from the Army in 12 to 18 months, you may count on the maximum number in the minimum time. Allow, too, for the fact that Selective Service is asked to provide 500,000 in the next year to replace that many now overseas and that the Navy will cut about 50% or 2,000,000.

That means discharge of something like 7,500,000 to 8,000,000 in

# THE OUTLOOK

(Continued)

BUSINESS WEEK  
AUGUST 18, 1945

the next year—and the peak rate will be around 1,000,000 a month some time in the late winter and early spring.

Remaining in the armed services would be nearly 5,000,000 if Army and Navy can keep them against mounting political pressure for their release. That would mean a continuing high budget item for pay and subsistence.

**Taxes**—There isn't much use in looking for passage of a new tax bill before late this year; too many other things will claim precedence over it and, besides, it isn't easy to win agreement on a major revision.

But, when it comes, the best bets are that (1) corporations will be relieved of excess-profits payments, (2) individual rates will be reduced very slightly and exemptions raised to help those in the low-income brackets, and (3) a large share of the wartime excises will be swept away (BW—Aug. 4'45, p120).

**Contract Termination**—Settlement of canceled war orders is, right now, the smoothest functioning segment of industrial demobilization. However, the scope of the job will be multiplied many times in the next 60 days.

One of the hopeful steps the termination people have taken is to institute a spot check of likely trouble spots. Where tough settlement problems loom, contractors have been urged to arrange loans to tide them over.

**Surplus Disposal**—Urgency of the problem, now that everything will become surplus at once, is the one hope for getting Congress to modify the law.

The President has asked for a single head to replace the three-man board, and there is every chance that this will win approval.

A request from the board for simplification of the "priority system" of offering goods to various types of buyers faces tougher sledding. The champions of small business and veterans want it even tighter.

**Prices and Rationing**—Price control will remain (at least until Congress kicks over the traces), but this week's action ending rationing for gasoline, fuel oil, oil stoves, and canned fruits and vegetables shows just how quickly a lot of the shortages will disappear.

There will be no pinch in bituminous coal this winter simply because industry won't use as much during reconversion as on war work.

The lid shortly will be taken off manufacture of automobiles and other consumers' hard goods. Passenger car output very early next year should reach a 4,000,000 annual rate. Trucks will come up much faster (page 15).

Output of refrigerators will soar from 125,000 in the third quarter to 700,000 in the fourth, WPB believes, and distribution controls will come off as soon as dealers' stocks are reasonably replenished.

Other WPB estimates: washing machines, 125,000 in the third quarter and 500,000 in the fourth; sewing machines, up from 10,000 to 75,000; electric ranges, from 45,000 to between 75,000 and 100,000.

Tires will be plentiful when factories get a little more manpower.

Shoes and textiles will be much more plentiful before the year end.

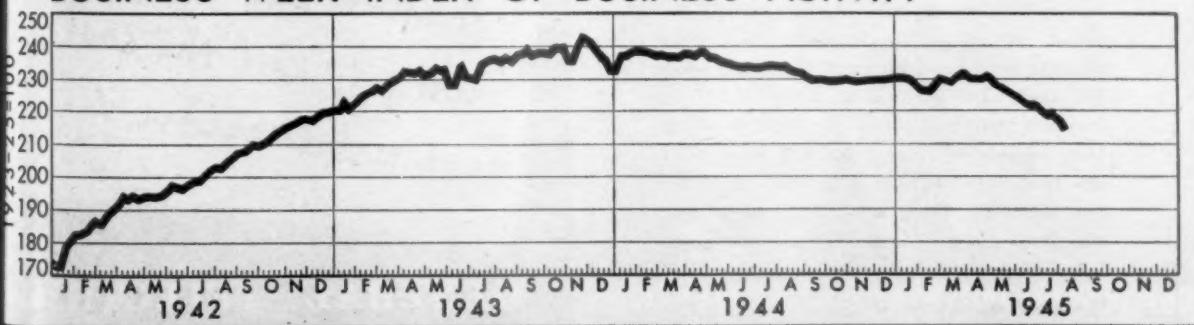
But supply and demand for meats, butter, cheese, and the edible oils probably won't be in balance for another six months, give or take a few weeks. Yet there will be seasonal improvement in meat this winter and the military will take very much less than in the past.

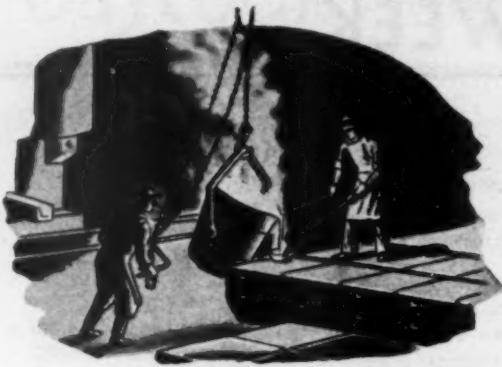
# FIGURES OF THE WEEK

	\$ Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below) . . . . .	*214.7	†217.6	218.8	227.5	235.2
<b>PRODUCTION</b>					
Steel Ingot Operations (% of capacity) . . . . .	82.5	87.9	89.8	91.4	95.6
Production of Automobiles and Trucks . . . . .	20,790	18,690	16,500	20,960	18,895
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands) . . . . .	\$8,198	\$8,237	\$7,671	\$4,250	\$6,447
Electric Power Output (million kilowatt-hours) . . . . .	#	4,432	4,295	4,505	4,415
Crude Oil (daily average, 1,000 bbls.) . . . . .	#	4,922	4,944	4,740	4,667
Bituminous Coal (daily average, 1,000 tons) . . . . .	1,892	†1,999	1,625	1,882	1,993
<b>TRADE</b>					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars) . . . . .	81	82	82	76	83
All Other Carloadings (daily average, 1,000 cars) . . . . .	62	65	65	47	65
Money in Circulation (Wednesday series, millions) . . . . .	\$27,269	\$27,130	\$26,932	\$25,411	\$22,910
Department Store Sales (change from same week of preceding year) . . . . .	+22%	+15%	+32%	+12%	+5%
Business Failures (Dun & Bradstreet, number) . . . . .	8	18	25	14	16
<b>PRICES (Average for the week)</b>					
Spot Commodity Index (Moody's, Dec. 31, 1931=100) . . . . .	254.5	255.0	255.8	253.7	249.8
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939=100) . . . . .	166.4	166.5	166.6	166.3	165.2
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939=100) . . . . .	226.0	226.7	226.8	225.0	221.9
Finished Steel Composite (Steel, ton) . . . . .	\$58.27	\$58.27	\$58.27	\$57.55	\$56.73
Scrap Steel Composite (Iron Age, ton) . . . . .	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.) . . . . .	12,000¢	12,000¢	12,000¢	12,000¢	12,000¢
Wheat (Kansas City, bu.) . . . . .	\$1.60	\$1.60	\$1.58	\$1.66	\$1.50
Sugar (raw, delivered New York, lb.) . . . . .	3.75¢	3.75¢	3.75¢	3.75¢	3.74¢
Cotton (middling, ten designated markets, lb.) . . . . .	22.45¢	22.52¢	22.72¢	21.51¢	21.38¢
Wool Tops (New York, lb.) . . . . .	\$1.330	\$1.330	\$1.330	\$1.340	\$1.325
Rubber (ribbed smoked sheets, New York, lb.) . . . . .	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
<b>FINANCE</b>					
90 Stocks, Price Index (Standard & Poor's Corp.) . . . . .	116.9	115.6	117.9	109.5	102.0
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's) . . . . .	3.27%	3.27%	3.26%	3.41%	3.55%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's) . . . . .	2.61%	2.61%	2.60%	2.66%	2.72%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average) . . . . .	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6 months, N. Y. City (prevailing rate) . . . . .	1%	1%	1%	1%	1%
<b>RANKING (Millions of dollars)</b>					
Demand Deposits Adjusted, reporting member banks . . . . .	37,062	37,533	36,308	36,034	33,565
Total Loans and Investments, reporting member banks . . . . .	63,052	63,696	64,235	59,007	56,524
Commercial and Agricultural Loans, reporting member banks . . . . .	5,914	5,926	5,928	6,346	6,013
Securities Loans, reporting member banks . . . . .	4,469	4,830	5,238	5,083	2,849
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks . . . . .	46,771	47,000	47,338	44,219	42,289
Other Securities Held, reporting member banks . . . . .	3,306	3,303	3,125	2,936	2,939
Excess Reserves, all member banks (Wednesday series) . . . . .	1,140	1,140	1,140	922	927
Total Federal Reserve Credit Outstanding (Wednesday series) . . . . .	22,606	22,564	22,028	19,703	15,604

Preliminary. † Revised. # Not available at press time. \$ Ceiling fixed by government. ¶ Date for "Latest Week" on each series on request.

## BUSINESS WEEK INDEX OF BUSINESS ACTIVITY





**30% LOWER POWER COST.** and a 30 per-cent increase in power capacity, resulted from the installation of G-E capacitors in a western foundry. No additional wiring, switch, or fuse capacity was required.

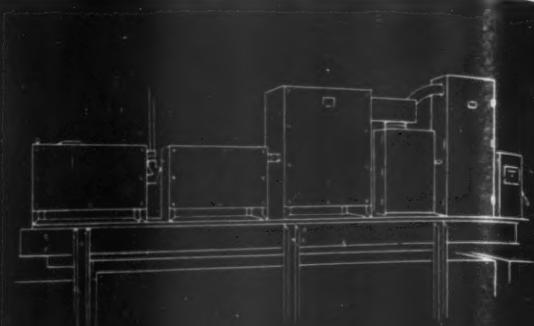


**SAVES \$1000 A MONTH.** At a war plant in Detroit, G-E capacitors were installed at a cost of \$13,000. The resulting power-factor improvement reduced the power bill an average of \$1000 monthly.

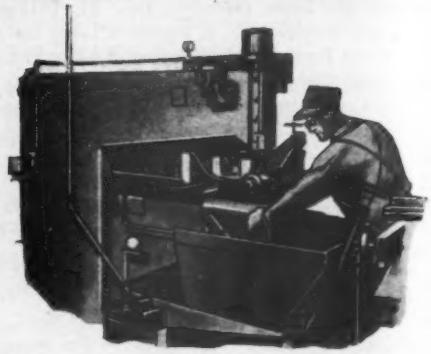
## TO S-T-R-E-T-C-H POWER DOLLARS..

Breaking power bottlenecks has been the big war job of G-E Pyranol<sup>\*</sup> capacitors. They have reduced power demand in some plants, boosted system capacity in others. They have saved tons of critical material. They have stepped up the performance of motors, welders, and other equipment. Come V-J Day, they will have an equally big peacetime job. May we help you determine just what—and how much—G-E Pyranol capacitors can do for your plant? Call the G-E office nearest you. Apparatus Dept., General Electric Company, Schenectady 5, N. Y.

\*Trade-mark reg. U.S. Pat. Off.



**POWER DEMAND CUT 33%.** This and two other installations of G-E capacitors, in an iron works, markedly improved the plant's electrical service and effected a sizeable reduction in power cost.



**PRODUCTION WENT UP** as the number of rejects went down, after G-E series capacitors were installed in a big steel-welding shop. Also, welds are more uniform, light flicker was eliminated.

## ...USE G-E CAPACITORS

*Another ELECTRICAL  
way to cut the cost  
of production!*

**GENERAL**  **ELECTRIC**

Key figures  
version; V

# BUSINESS WEEK

NUMBER 833

AUGUST 18, 1945

## Coming: A Postwar Boom

Despite the temporary jolt, business picture is bright. By year end, manufacturing and employment may be at 1941 levels. Materials supply ample; change-over outpaces expectation.

Good business by the year's end, a boom by next summer.

That forecast is better than most observers thought could be expected with the war in the Pacific ending so soon after that in Europe. It's better than the official view in Washington today. Yet the chances are more than 50-50 in its favor.

The big jolt is in the 60 days right ahead of us. During those two months, munitions output is due to be cut two-thirds from present levels.

• **Clearing the Decks**—There is no denying that this cutback means a sharp drop in industrial activity and a big rise in unemployment between now and the middle of October. But, by the same token, it means that the decks will be cleared just that much sooner for complete reconversion.

By the end of the year, it is probable that over-all manufacturing activity and the level of unemployment will be no worse than in 1941, a pretty fairly prosperous year. Major strikes, as opposed to the prevalent quickies, are the only factor that might block the rapid upswing (page 98).

• **What Detroit Can Do**—Key to the whole outlook is Detroit. On-the-scene observers, who rely more on what they see in the plants than in the headlines, are willing to bet that the auto industry

can be producing passenger cars at the rate of 4,000,000 annually right after the turn of the year.

If the auto people can get tuned up that fast, there is little reason for other types of industry to be any slower, because none faces more serious reconversion problems than the passenger car makers. Construction, however, will be a slow starter among the big job-providing industries. But building will get off to a good start next year.

• **Ready to Go**—An offset to the relatively slow start that will characterize construction is the relatively favorable position of the capital goods industries which also are large creators of jobs. Most lines such as railroad equipment, construction machinery, agricultural implements, and trucks have been making their regular peacetime products, or very similar equipment, in greater or lesser degree. Today they are largely reconverted, ready to go full tilt.

The same goes for consumer soft-goods lines. Textile mills have been making yarn and cloth; shoe factories have been making shoes. They may have to change looms and lasts, but the only other reconversion is the change of names on their order books.

• **Without Much Tapering**—There has been a lot of talk about "stop-work points" that would let munitions output

taper off rather than be canceled outright. But there won't be much of this. Once the decision to cancel a contract is made, work will stop dead in its tracks.

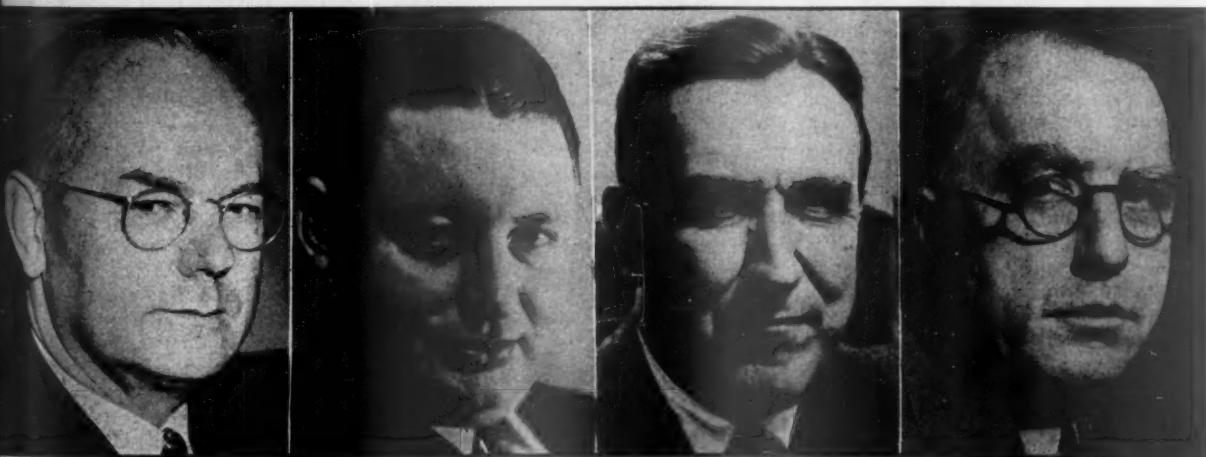
There are a few exceptions to this as a matter of common sense. A certain number of pretermination agreements have been made that will allow work to go ahead to avoid economic waste.

A producer of olive drab wool yard goods is likely to have on hand a substantial amount of cloth on the date of cancellation which may have cost him a pretty fancy figure—maybe \$2.50 per yard. It would ultimately have to go into surplus if the Army took it, but for an additional cost of a few cents a yard it could be dyed and directed to civilians who badly need it.

• **A Saving for the Army**—The Army would pay the slight cost of dyeing as the sole contract termination charge in place of \$2.50 a yard and thus avoid the loss entailed in disposal as surplus.

The War Production Board could probably drop controls over pretty nearly everything except possibly tin, but the plan is to retain a handful of regulations until there is time to see how things are going. This is particularly true of its inventory controls, to prevent hogging and hoarding of the handful of materials and components that may remain scarce for a few weeks. While checking up on this handful—probably 25, such as electric motors, castings, and certain plastics—some semblance of allocation control will be kept on the products themselves.

• **OPA's Role**—The Office of Price Administration will continue to set reconversion prices along the lines hereto-

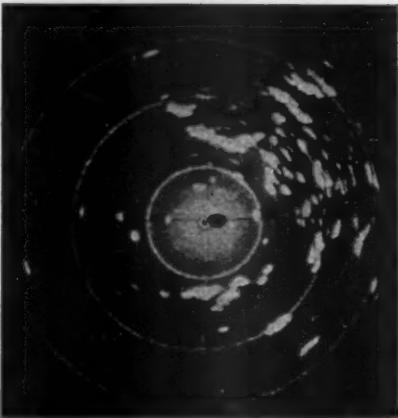


Key figures in the shift from war to peace: (left to right) Director John Snyder, Office of War Mobilization & Reconversion; WPB Chairman J. A. Krug; OPA Administrator Chester Bowles; Secretary of Labor Lewis Schwellenbach.



### CROW'S NEST—EXTINCT

Through the all-seeing eye of radar (page 63), a ship captain keeps watch during thick weather with General Electric's "electronic navigator"—now being readied for peacetime use. Other ships, obstacles, and land are detected in any weather at distances up to 30 miles, the "echo" radio impulses being projected on a scope (right) which reveals the bearing and distance of obstructions, removing the danger of collision.



fore planned (BW-Jul.28'45,p21). Arguments for taking ceilings off consumers' hard goods to make speedy reconversion easier were talked down by the price fixers.

The high-policy decision against taking off practically all controls at once will mean hardships for individual manufacturers in some cases, but it won't materially slow the main stream of reconversion, Washington figures. And, in watching the time-honored beacons for guidance, businessmen should not be unduly discouraged by the depth of the decline in the indexes of business activity that will be witnessed over the next three months.

• **Wartime Distortion**—Figures on volume of manufacturing, particularly heavy lines, are readily available; hence they are the touchstone of statistical measurement. But, in time of war, manufacturing soars out of all proportion to its place in our normal economy. This has exaggerated the 240 top to which Business Week's index of business activity rose, and it will also distort the rapidity of its fall.

On the other side of the picture, government expenditures will not drop in proportion to the cut in munitions expenditures nor to the slump in manufacturing volume. (There still will be pay and maintenance for a large military establishment, plus veterans' payments, even though public works won't loom large in government outlay for the immediate future.)

• **With Respect to Income**—Thus consumers' incomes will fall less drastically than accepted business indexes. The trades and services will fill a more normal portion of the total economy. If the Business Week index falls 30-odd percent from recent levels—from 220 to around 140 or 150 late in October, as it well may—the concussion will not be as serious as it might appear at first glance. In the same period, national income isn't likely to be off more than 15% to 20% (contrary to many dire predictions).

But here's another tricky thing about the figures. The Business Week index will score a fair recovery late in the year, perhaps to 160 or 165, but national in-

come will continue to ease a little more to stand perhaps 20% below present levels on Jan. 1.

### CUTBACKS

The process of cutting munition output has proceeded a good deal beyond anything that has been intimated.

Unofficial figures, not yet published, show July down a full 10% from June and approximately 23% below the March level of \$5,000,000,000 (as computed by WPB in terms of August 1943, dollars). The first half of August undoubtedly has witnessed a further substantial decline—if only because of slowdowns, absenteeism, and wildcat strikes, as the end of the Japanese war came into sight.

• **Away From War Output**—Thus we have come more than a quarter of the way in getting out of the business of war. The cutbacks of the next 60 days will be about two-thirds, mostly in the immediate future, according to the best information. That means munition output by mid-October will be less than 25% of the March level or under \$1,250,000,000. By the year end, it is likely to dip to around \$750,000,000 with the slide gradual from there on.

Thus there is little question that business will have plenty of elbow room for reconversion from now on. The worry, of course, is that the dislocations will be too great; the way would have been smoother if the time between the end of the two wars had been longer. Yet while the going unquestionably will be rough in spots, there is the consolation that manpower and materials in general must become ample very soon. Moreover, we already have gone far enough so that the future is, relatively, just that much easier.

### CONSUMERS' HARD GOODS

Talk about how far we have progressed isn't just Pollyanna stuff. This may be seen in a realistic appraisal of the situation in automobiles (which will be matched or bettered by refrigerators, washing machines, vacuum cleaners, building hardware, pots and pans, and any number of other items).

The machine tool bottleneck has already been broken; Ford is reported to have filled its immediate needs. WPB is paving the way with priorities for construction necessary to get up to volume production. Procurement of textile tools is now barely meeting requirements, is on an odds-and-ends basis but will improve rapidly as Army and Navy begin to live on their stockpiles. Even if tin from the East Indies and Malaya amounts only to a trickle (and we may be surprised with quantities available), auto

ducers are hopeful that Washington will give them what they need.

**How Soon, How Many?**—How soon will autos get rolling? One veteran observer, who admits he may have on colored glasses, wouldn't be surprised to see output of 300,000 passenger cars, maybe even 330,000, in December. Others, who also claim to be optimists, set their sights at 200,000 to 250,000 for the last month of this year. If the auto people hit 250,000 in December, they can top a 4,000,000 annual rate before the end of January. Meanwhile, spare parts for old cars will come along rapidly because the Army will quickly slash its recent hand-hoist buying of repair parts for its many types of vehicles.

Maybe autos and mechanical refrigerators won't quite reach 1941 volume by the end of the year. Myriad lighter items which have been in modest production for some time—stoves, vacuum cleaners, electric irons—will get there sooner and pull the average up.

## CONSTRUCTION

Building is making progress, though slowly. Volume is up about 25% over a year ago—or last March, for that matter—due to rising private and governmental nonwar outlays. Volume, now around \$450,000,000 monthly, is about half the 1941 average. Residential construction will be held back by the lumber shortage, but this scarcity will be relieved as manpower becomes available in forests and mills, as the Army cuts back its huge takings, and as use for dunnage declines.

## CAPITAL GOODS

Industry has the cash for refurbishing for the first time since the twenties (BW-Aug. 11 '45, p9) and is in a spending mood. War-weary facilities need replacement; increased wage levels improve wider technology.

Railroads have only about half as many freight cars on order as they bought in 1941, but the total will rise rapidly now that the carriers can get the types of construction that they want instead of just those that could be turned out most efficiently under wartime stringencies. Locomotive orders already top 1941 deliveries. Car shops and locomotive works have largely finished their war jobs, clearing the way for expanded business.

**Tools for Agriculture**—Farm implement makers, too, have pretty well finished their war work and demand for their products is the greatest ever. They will top 1941 volume handily in making the same tools needed for next spring. Motor trucks may not be up to 1941

unit volume at the moment (because the military has been taking a disproportionate number of great big babies). But they will get there in no time flat because the minor change-overs required have been largely completed.

Coal, textile, food, and other similar machinery on the average aren't more than 50% on war work so that reconversion isn't too much of a problem. Manufacturers' recent surveys indicate huge demand with volume possibly approaching 1941 by the year end.

• **Machine Tools**—Machine tools are now running around \$40,000,000 monthly in deliveries against around

\$60,000,000 in 1941 (when we already were tooling up for war). No important upturn is to be expected, especially in view of surplus tools in war plants.

Construction machinery volume long has been way above 1941, almost entirely war business and mostly for overseas. Contractors had to give up many machines to the Army, will rush to buy when the market opens up.

Importance of the generally bright outlook in these heavy lines may be appreciated from the fact that truck, farm implement, and railroad equipment firms will provide jobs for about 100,000 workers each.

## Business Looks at the Far East

Economic and political problems in wake of the Japanese capitulation call for prompt and decisive action by Allied leaders. New Soviet role complicates plans for China's industrialization.

The war is ended, but Tokyo's surrender confronts business with issues no less challenging than the problems left in the wake of the Nipponese attack on Pearl Harbor, on Dec. 7, 1941.

As in the case of Germany, a great industrial power—this one the pivot of trade in the teeming western Pacific—is to be whittled down to destroy its ability to wage war.

• **Shrunken Empire**—An empire, built during the past 50 years to the point where its 3,000,000 sq. mi. of territory and half a billion people made it a

rival of the British—at least in size—will shrink to less than 150,000 sq. mi. with fewer than 70,000,000 people.

Not only is Tokyo to be stripped of its conquests of the past eight years in China and southeast Asia (map, page 18); even Korea, Manchuria, Sakhalin, and Formosa are to be detached from Japan.

• **Eclipse for Industry**—Forewarning of the temper of the Tokyo treaty, when it is drawn, is provided in the Potsdam ultimatum. This declared that Japan will be permitted to maintain such industries as will be necessary to sustain the economy and permit the exaction of just reparations. But those industries which would make rearment possible are not to be allowed.

Even if applied leniently, this Allied decision is bound to be a blow to Tokyo's industrial power.

• **Lose Manchurian Steel**—Japan's steel industry, almost miraculously expanded in the ten years before the war until it was the world's fifth largest—the U. S., Russia, Germany, and Britain led in the order named—will no longer include the great blast furnaces and coking ovens in Manchuria.

Moreover, because Japan itself lacks important reserves of iron ore, bomb-blasted Yawata, the Nipponese Pittsburgh, must in the future depend on imports, not from stolen mines, as in the past, but obtained through open markets where Japanese purchases will be watched and tightly controlled.

• **Shipbuilding to Shrink**—Bustling shipyards at Nagasaki, Shimonoseki, and Kobe which, between 1931 and 1937, boosted their working force from 160,000 to 600,000 will shrink drastically.

Vast fishing fleets with their own



As Supreme Allied Commander, Gen. MacArthur, not Emperor Hirohito, becomes boss man over East Asia.

# Liquidating Japan's Co-Prosperity Sphere

Japan's dream of world conquest—first stage of which was to have been the creation of a vast "Greater East Asia Co-Prosperity Sphere" to be ruled from Tokyo—has collapsed.

• 3,000,000 Sq. Mi.—Begun cautiously 50 years ago when Korea and Formosa were detached from China, the process of turning this fantastic scheme into reality proceeded systematically and with increasing ruthlessness until it engulfed most of China and southeastern Asia—an empire which, at its crest, sprawled over 3,000,000 sq. mi., controlled more than half a billion people, and contained the world's best sources of natural rubber and tin, as well as rich reserves of antimony, tungsten, chrome, iron ore, coal, petroleum, vegetable oil, and hemp.

Today, the Allies are preparing for the systematic liquidation of that rambling assembly of stolen territories. Some, like China, will be restored to their former owners. For others, like many of the Pacific islands, there will be some new security status which will be defined when the details of the peace are dictated in Tokyo.

• Liquidation Pattern—In its essential outlines, however, the liquidation pattern is already clear (map):

① The British Empire will reclaim Burma, Malaya, and the British portions of Borneo and New Guinea.

② Indo-China is scheduled to be handed back to France.

③ Holland will reoccupy its rich empire centering around Sumatra, Java, Borneo, Celebes, and New Guinea.

④ The Philippines, scheduled before the war to receive political independence in 1946, will revert to the U. S., but for how long and on what specific political and economic terms must still be decided by Washington. Guam (and Wake) will be back in U. S. hands and will undoubtedly be fitted into the Pacific security control pattern outlined briefly by the President last week.

⑤ China will be cleared of Japanese troops, and Formosa will be restored to Chinese control.

⑥ The southern half of Sakhalin, after 40 years under Japanese domination, will be rejoined to the Russian-owned northern half of the island (BW—Apr. 8 '44, p16).

⑦ Outer Mongolia will probably be internationally recognized as a

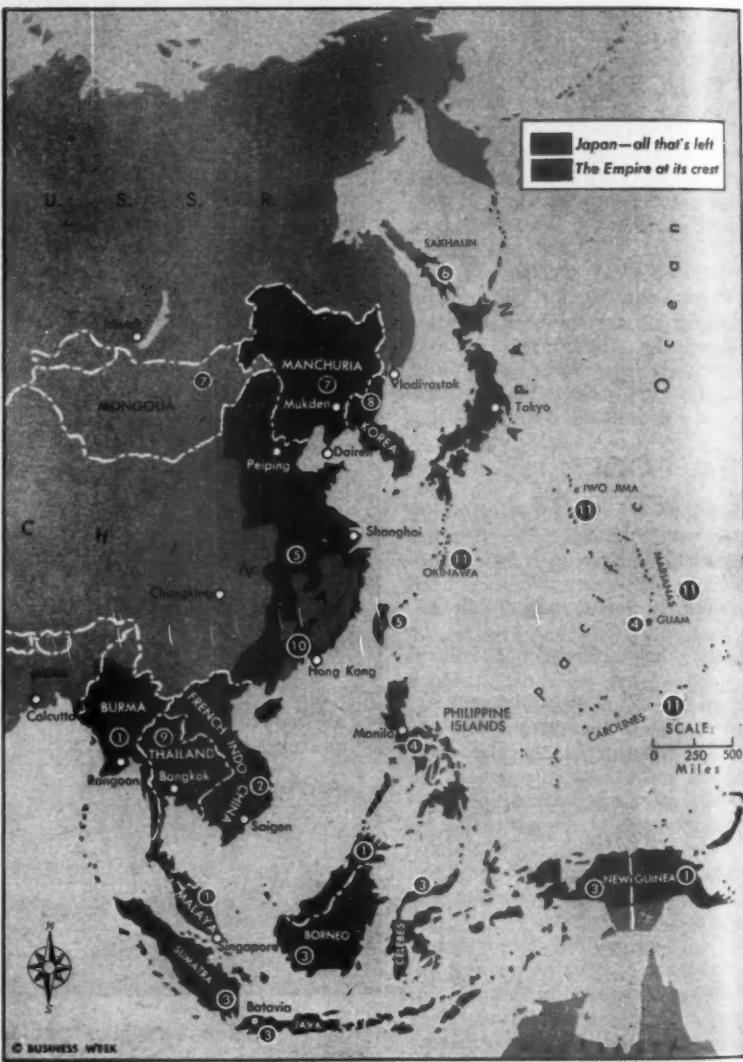
Soviet sphere of influence, may even be united with Inner Mongolia to form a single republic which would act economically and politically on dictates from Moscow. Also, the Soviet Union undoubtedly will demand and receive special transport right-of-way in Manchuria, with possibly a new lease on the Russian-built port of Dairen. If Manchuria is made an independent republic, it too would be oriented toward Moscow.

⑧ Korea has been encouraged to expect its independence, but probably with some form of international advisory commission in Seoul until a locally chosen government can be elected.

⑨ Thailand presumably will become independent again, but with a government that meets the approval of the liberating Allies.

⑩ Hong Kong, British-controlled before the war, is generally expected to become a United Nations base, probably still dominated by Britain but with gradually increasing participation by Chinese authorities.

⑪ Tokyo's Pacific islands, including former Japanese mandates (like the Marianas and Carolines) and strategic pieces of Japanese territory (like Okinawa and Iwo Jima), will become bases controlled by the U. S. or other members of the Big Five, or will be placed under international trusteeship.





## NOT NO BARGAIN FOR TAXPAYERS

ate of swarms of unwanted, outdated, strictly military planes—multi-engined bombers and power-heavy fighters may be read from the sale of a battle-scarred B-17 to the Williamsport (Pa.) Technical Institute. It sold for \$350

—one thousandth of its original cost. To be used as a laboratory of aircraft design and operation, the plane was purchased from the Surplus Property Board under an educational distribution program. What happens to others like it—uneconomical for commercial operation, costing too much to salvage—is a prime postwar headache.

ating canneries will no longer be allowed to roam strategic waters off Siberia and Alaska.

And the Japanese cotton textile industry must henceforth compete for business without the benefit of Tokyo's pressure politics or of markets guaranteed by conquest.

**Unanswered Questions**—Not until the peace conference meets in Tokyo and ratifies the Pact of the Pacific will some of the basic questions be answered:

What power—or powers—for instance, will be made trustee for the myriad Japanese islands scattered across the Pacific?

And which of these islands will become bases for control of the Pacific? President Truman has made it clear that the U. S. will demand a chain of stepping stones to Asia, with enough additional bases to protect them.

**France's Role**—What will be the pattern for coordinating these bases with those of the other Allies in the Pacific? Britain is expected to rebuild Singapore as a major Far Eastern outpost, but will France be asked or allowed to create bases in Indo-China or on the strategic island of New Caledonia? And what will be expected of the Dutch in the rich and vulnerable Netherlands East Indies?

**Philippine Problem**—The United States faces the immediate problem of the Philippines.

Prewar plans called for the full reparation of the islands in 1946 and had been expected that tariffs would be applied gradually on Philippine im-

ports into the U. S. This was intended to prepare the islands' industries for economic independence by forcing them either to adjust domestic costs so that they could continue to sell in the U. S. market despite the tariff, or to find other markets.

It is clear now that the time allowed for this transition was inadequate. Nevertheless, it is equally clear that Washington intends to stand by the original cutoff date.

As a result, owners of most of the sugar refining and oil processing facilities in the islands are disinclined to revive their industries because one year of tariff freedom to enter the U. S. market is inadequate to permit a write-off of the costs involved.

• **Other U. S. Problems**—U. S. business has other direct stakes in the coming Pacific negotiations.

At the time of Pearl Harbor American direct investments in Japan had been liquidated until not much more than \$60,000,000 remained, most of this in machinery and oil-handling facilities. U. S. holdings of Japanese bonds also had shrunk to a small fraction of the \$500,000,000 that were outstanding in the U. S. at the outbreak of the war in Europe.

But in other parts of Asia now being liberated, nearly 200 U. S. firms have direct holdings in business amounting to \$250,000,000 which should now be recovered, though in what condition remains to be seen.

• **Investments in Asia**—In China, largely in the Shanghai zone, the investments amounted (according to prewar records)

to more than \$90,000,000, compared with \$92,000,000 in the Philippines, \$70,000,000 in the Netherlands East Indies, and less than \$25,000,000 in Malaya.

Manila is already crowded with American businessmen and engineers surveying their damaged properties and the possibilities for the immediate resumption of trade.

British and U. S. experts are in the oil fields in Borneo, and production in some wells, particularly in the Tarakan area, has already been resumed. First reports indicate that output will not return to prewar levels for a year though these estimates may prove pessimistic.

• **Outlook on Tin**—Since tin is expected to be the tightest of all industrial raw materials for another six months, the mines in Malaya and the Netherlands Indies which normally produce 70% of the world's supply will be given top priority on equipment needed to put both the mines and the refineries into immediate production.

British and Dutch interests control most of the properties but U. S. manufacturers of everything from tin cans to automobiles (which normally utilize from 6 to 8 lb. of tin per car) are eager to learn as soon as possible the condition of the huge tin dredges and what stocks of ore and refined tin are found (page 111).

• **Scattered Assets**—One little discussed form of reparations which will inevitably be exacted from Tokyo will turn up as southeastern Asia and China are reoccupied. This is the string of properties which Japan shrewdly began to

acquire long before extending its aggression outside China.

One of the largest Japanese investments which now fall into foreign hands is the New Caledonia Mining Co., a \$1,150,000 nickel mining development in the French island of New Caledonia. Another is the \$2,300,000 apatite fertilizer development in French Indo-China. Japanese-owned rubber plantations in Sumatra were valued before the war at \$20,000,000.

• **Russia's Influence**—Putting Russia into the postwar economic picture in the Far East is worrying business in the other Allied countries.

If the peace conference unites Inner and Outer Mongolia (map, page 18) in a single, nominally independent country (though under Soviet domination), and if a similar satellite pattern is followed in Manchuria where it is already clear that the occupation forces are going to be Russian, the long-term Russian influence on Chinese economy is likely to be very great.

The Chinese Communist forces, centered about Yenan, control an area stretching north to Inner Mongolia.

They also claim to have important guerrilla armies far inside the wartime Japanese lines around Tientsin and Peiping. If Moscow eventually controls the important Japanese industries of Manchuria, the stage will be set for a Russian-sponsored industrialization program for the poverty-stricken population of North China.

• **Potential Sore Spot**—This becomes an immediate challenge to the other Allies if they choose to back the Chiang Kai-shek government.

It means that present vague discussions of helping to industrialize China will need to be translated into action promptly if Soviet economic patterns of government ownership of industry and of a centralized foreign trade monopoly are not to win a permanent foothold in that country (page 112).

• **Faster Recovery**—Whether the Tokyo peace plan is drawn soon or not for several months, business in the Far East will revive more quickly than in Europe. This is due, in part, to the fact that the end of the war means that more shipping will become available quickly, and in part to the fact

that most of the liberated areas of Japan itself are less dependent on industry and that what industry possess is less battered than is the case in Europe.

• **U. S. Responsibility**—It is on U. S., however, that the main responsibility rests to see that certain equipment is allocated to help get wheels turning again, and that credits are made available to finance the business on reasonable terms.

The Dutch have already asked loans against their large dollar balance and investments in the U. S.

The present London conference, William Clayton, Assistant Secretary of State, are directly concerned with problems of blocked sterling, the easing of wartime foreign trade controls, and issue of a huge credit for Britain beyond any loans that may be secured privately or through the Export-Import Bank.

The problem of China may become the basis for a special Chinese-American conference as soon as Japanese troops are withdrawn and the Chinese government is reestablished in Nanking.

## The War of the Amphibians: A Four-Year Story

"Remember Pearl Harbor" was one of history's needless admonitions, for nobody could possibly forget it. To American military men in the Pacific, the outlook by noontime on Dec. 7, 1941, was anything but bright. The enemy's air raids of that morning had been more than effective. In the harbor was a mass of wreckage. Shore installations had been devastated, their airplanes and other equipment reduced to disordered junkpiles.

Other reverses were to follow rapidly, in distant corners of the Pacific. In no other war was it quite so difficult to come to grips with the enemy, either offensively or defensively; in no other, perhaps, was the role of seapower so accentuated. In none, certainly, were supply lines so difficult to establish and maintain.

Passing slowly from the defensive, losing phase, to the offensive, winning phase, the American campaign in the Pacific entailed the development from small beginnings of a new type of warfare, featuring the aircraft carrier and the landing barge. Sea, land, and air components had to be synchronized for thrusts at an enemy thousands of miles away.

Briefly, the record ran:

1941—Three days after Pearl Harbor, the Japanese were landing on

Luzon. At the same time, they were pushing down the Malay Peninsula. On Dec. 22, they invaded Borneo. Wake Island fell on Dec. 23.

1942—Except for the spectacular Doolittle air raid on Tokyo of Apr. 18, there was another half year of negative news from the Pacific. The Japanese swept into Burma in January, took Singapore and defeated the Allies in the Battle of the Java Sea in February, and landed in New Guinea in March. The surrender of Corregidor occurred on May 6. The Battle of the Coral Sea (May 4-8) was hailed as a victory, but our losses were severe. The turning point came when the Japanese were thrown back in the sea and air Battle of Midway (June 4-6). Marines established beachheads on Guadalcanal on Aug. 7. On Aug. 9, in the Solomon Islands naval battle (Savo Island) the U. S. lost three cruisers and Australia lost one.

1943—Destruction of a Japanese convoy in the Battle of the Bismarck Sea (Mar. 2-5), the recapture of Kiska in the Aleutians (Aug. 19), and the taking of Tarawa and Makin Islands (Nov. 20-24) were military high points. Island fighting was costing heavy casualties, but with consolidation of what had been gained in the Solomons and in the Gilberts,

and with the Japanese stalemated in New Guinea, new accumulations of materiel could be made for further blows at the enemy.

1944—First invasion of Japanese territory occurred at Kwajalein on Feb. 1. By Feb. 5, the Americans had 19 of the 30 isles of the Marshall group. On June 14, the invasion of the Marianas was begun. Occupation of Saipan and Guam followed. On Oct. 19, Gen. Douglas MacArthur announced that the eastern coast of Leyte in the Philippines had been seized, cutting in two the Japanese sphere of conquest. Nov. 29 marked the beginning of B-29 raids against Japan, from bases in the Marianas.

1945—The Army and the Navy were closing in on Japan. American forces landed on Luzon on Jan. 9, and the recapture of Manila was proclaimed on Feb. 6. The battle for Iwo Jima began on Feb. 17. Okinawa was invaded on Apr. 1. With success in those bitterly contested engagements, and with the U. S. Navy hemming in the home islands of Japan, the stage had been set for the coup de grace—the atomic bomb. The bomb fell on Hiroshima on Aug. 6; Russia invaded Manchuria on Aug. 9; the Japanese sued for peace on Aug. 10.

## Element No. 94

Additional disclosures on atomic bomb reveal creation of plutonium from uranium-238. Widens vista of utilization.

Even before the public had absorbed the tremendous significance of last week's news of how to unleash atomic energy, important new vistas in the utilization of that power were unfolded this week. It was officially announced that a new, man-made synthetic "element" has been created which has the physical properties required for use in the atomic bomb.

**Known as Plutonium—Importance of this new element, plutonium, is indicated by the fact that the entire Hanford Engineer Works at Richland, Wash., is devoted to its production. This plant went into operation in September, 1944, and has been in full production since June, 1945. (E. I. du Pont de Nemours & Co., its builder and operator, thus appears to be the only concern in the world with the industrial "know-how" for making plutonium.)**

Whether it is superior to uranium-235, the uranium isotope hitherto popularly considered as the touchstone of atomic energy, is not disclosed.

**Production Advantages**—That it has certain advantages from the production standpoint appears likely. These advantages are chiefly twofold:

(1) Plutonium is created from uranium-238, the stable isotope which comprises 99.3% of all uranium. U-235, by comparison, represents only .7% of all uranium.

(2) Being different chemically from uranium, it can be separated by chemical methods from uranium and the other materials used in its production. U-235, by contrast, has the same chemical reactions as U-238, thus must be separated by much more complicated methods based on its different mass.)

This information is buried in a lengthy report issued this week by the War Dept., written by H. D. Smyth, chairman of the Dept. of Physics of Princeton University and consultant to the Manhattan District, U. S. Corps of Engineers.

**93d Element Created**—Plutonium, Smyth reports, is created in the following fashion:

U-238 is bombarded with neutrons under carefully controlled conditions. In this process a neutron is added to the nucleus of the common, garden-variety of uranium. This produces U-239, an unstable uranium isotope



### SOMETHING NEW HAS BEEN ADDED

Just what to expect from now until something more dramatic catches the public eye is the quick capitalization on the war's most amazing discovery—the atomic bomb. One New York bartender has already named a new cocktail concoction after the bomb but the Knoxville (Tenn.) real estate firm which has launched a subdivision has a more legitimate reason for its sign—the project's on the pike leading to Clinton, site of one of the main atomic bomb plants.

with a half-life of 23 minutes (every 23 minutes half its weight changes into a more stable substance). In the course of this disintegration process, one of the neutrons in the nucleus of the U-239 atom changes into a proton, and a beta particle, a high-speed electron, is thrown off. The result is a new element, neptunium, No. 93 on the periodic table in which uranium formerly ranked at the top as No. 92.

• **Also No. 94**—Neptunium, itself a synthetic element not found in nature, is unstable, having a half-life of 2.3 days. It repeats the neutron-to-proton transformation without outside activation, emerging as plutonium, element No. 94.

Plutonium is relatively stable; its half-life is more than 1,000 years. Moreover, it has the same characteristic as U-235—it can be split under neutron bombardment to release the terrific energy that makes the atomic bomb so devastating.

• **How Bomb Is Exploded**—The report also indicates that the atomic bomb may be exploded simply by bringing together a specific quantity of the U-235 or plutonium, eliminating the necessity for artificial bombardment to split the atoms. These two elements have what is termed a "critical mass"

—which means that they will "explode" spontaneously if a specified (but unrevealed) amount is agglomerated. (As long ago as 1941 the critical mass of U-235 was found to be somewhere between 2 kg. and 100 kg.—roughly 4.4 lb. to 220 lb.)

This suggests a probable method for exploding the atomic bombs. Two batches of U-235 or plutonium whose combined weight exceeds the critical mass could be placed in a bomb. By suitable means, these two would be united when explosion is desired.

• **Speed Controlled**—Significant to future industrial utilization of atomic energy is the fact that scientists working on the plutonium phase of the Manhattan Project learned how to control the speed of the reaction—for it is through controlled release of the energy (contrasted with the explosive reaction of atomic bombs) that industrial application will be made possible.

Whether U-235 or plutonium, or both, were used in the two atomic bombs released over Japan has not been disclosed. But the fact that the second bomb, which hit Nagasaki, was described as more potent than the first, leads to some conjecture that perhaps it was plutonium which proved the more effective.

# Now It Can Be Told: More About Atoms

The vast, coordinated research project which produced the atomic bomb (BW—Aug. 11 '45, p15) is documented in a 194-page report released by the War Dept. this week. Bearing the imposing title, "A General Account of the Development of Methods of Using Atomic Energy for Military Purposes Under the Auspices of the United States Government, 1940-1945," it was written by H. D. Smyth, chairman of the Dept. of Physics of Princeton University and consultant to the Manhattan District, Corps of Engineers. Although the document explains the basic research and outlines fundamental principles of atomic energy, it makes no disclosure about vital production processes or about the construction of the bomb. The report is particularly significant for its discussion of the new man-made "elements," plutonium and neptunium.

## Extreme Heat Available

One possible use of the great heat created by nuclear fission is the creation of new types of materials, or the synthesis of materials found in nature which man has been unable to duplicate. One report on the atomic bomb test in New Mexico said the surrounding earth was fused to a "glasslike" substance. Thus it might be possible to produce new granitelike materials in furnaces using temperatures hitherto unattainable. Possibilities, if the process is controllable, are endless.

## Atomic Headquarters

Although the atomic bomb program was dubbed the Manhattan Project because of the original research done at Columbia University, scientific headquarters of the program were actually at the University of Chicago, which is now intent on clinching peacetime leadership in the field. Some 5,000 scientists and technicians have been working on the project at the Midway institution since the day before Pearl Harbor.

This week, Chancellor Robert M. Hutchins announced the establishment of two new U. of C. divisions, Institute of Nuclear Studies and Institute of Metals, opening Oct. 1.

Outstanding in the group of 14 scientists already signed up are Enrico Fermi and Harold Urey, whose researches blazed a trail in atomic-smashing. Also associated

with the new program will be Arthur Holly Compton, who for years had headed Chicago's physics department and who served as top coordinator of all development work on the bomb.

Facilities for the new institutes will be provided by the many new atomic laboratories that mushroomed on the Chicago campus, some of them even in the center of Stagg Field, where football stars won fame before Hutchins abolished the inter-collegiate sport.

Hutchins obviously expects that corporations and industries will provide funds, but he is also counting on some federal aid. Recently Vannevar Bush, who heads the Office of Scientific Research & Development, proposed that the government establish fellowships in atomic research, a program which might begin with an annual expenditure of \$33,500,000 and be progressively increased until the total was \$122,000,000 by the fifth year.

Incidentally, the university reports that the first atomic bomb was not exploded in the New Mexican desert; a tiny model was detonated in Stagg Field.

## 179,000 Workers Aided

The War Manpower Commission recruited more than 179,000 workers from practically every state for the atomic bomb program. Of these, 80,000 were for the Hanford Engineer Work project at Richland, Wash.; 90,000 for the Clinton (Tenn.) project; and 9,000 for other parts of the Manhattan District activity.

## Blind Insurance

Not until the story on the atomic bomb broke did the Travelers Insurance Co. know the purpose of the war plant at Richland, Wash., on which it issued war risk insurance. To date, no unusual accidents have occurred.

## Mighty Dime

If all the mass of a dime (weight 2.5 grams) could be converted into energy, it would be sufficient to lift a weight of 68½ million tons (the total amount of world merchant shipping before the war) to the height of the 1,248-ft. Empire State building. That is in accord with Einstein's

formula on the conversion of mass to energy:  $E = Mc^2$ , in which E is the energy, M the mass and c the speed of light, or 186,000 miles per second. Actually, atomic bombs used against Japan used only one-tenth of 1% of the energy inherent in the U-235 or plutonium—whichever was used.

## Power Equivalent

All the two billion kwh. of power produced annually by electric utilities in Greater New York could be supplied not by one ton of uranium (BW—Aug. 11 '45, p16) but by only 740 pounds, a recheck of calculations has disclosed.

## Employs Hardest Metal

The hardest metal yet created by science, Carbonyl cemented carbide, was used in the atomic bomb. Created by Carbonyl Co. of Detroit, a General Electric subsidiary, it is made of powdered tungsten carbide and cobalt put under terrific pressure and heated in special furnaces to thousands of degrees temperature.

## Contributing Firms

The list of firms which contributed to the atomic bomb project grows apace. Latest additions, beyond those previously named (BW—Aug. 11 '45, p15), include: Akron Ornamental Iron Works, Burt Mfg. Co., Chamberlain Engineering Co., Combustion Engineering Co., Design Center, Inc., Firestone Tire & Rubber Co., General Cable Corp., B. F. Goodrich Co., Goodyear Tire & Rubber Co., Glenn L. Martin Co., Monsanto Chemical Co., Raytheon Mfg. Co., Standard Oil Co. (Ind.), United Air Lines, U. S. Stoneware Co.

## Has Its Own Journal

First issue of "Atomic Power," a technical periodical published by the McGraw-Hill Publishing Co., Inc., made its appearance the day following President Truman's announcement that the first atomic bomb had been dropped on Hiroshima. In mimeograph form, this initial issue carried an article by Philip W. Swain, editor, on "Uranium 235—Power Fuel of the Future?" Priced at 25¢ a copy, Atomic Power will be devoted to the physics of the atom and commercial applications of atomic energy.

# Whence Uranium?

**Canada's Northwest and Belgian Congo have the richest deposits, but low-grade supply available to most nations.**

As the people of the Allied nations recovered from the first shock of news about the atomic bomb, the week saw growing insistence for proper controls over the sources of uranium as well as over the development and use of its explosive power. In line with this demand the Canadian government reminded the public that it had taken over the mines and extraction plant of principal producer. The U. S. government has not revealed its long-term policy but allows commercial companies to continue production under strict military supervision.

**Two Chief Sources**—Most important uranium deposits are those at Great Bear Lake, in Canada's Northwest Territories, and at Katanga, Belgian Congo. Canada's uranium comes from pitchblende, brownish to velvet black mineral substance. In Colorado uranium is refined from carnotite deposits where it appears alongside vanadium.

Tailings, the refuse of mills processing vanadium ore, were a handy American source. Our low-grade deposits extend from Colorado into Utah, Arizona, and New Mexico. Mines are mostly small "diggings."

**U. S. Production Revived**—The Colorado carnotite lost its commercial importance between 1910 and 1920 when other foreign sources were developed. Its production was revived when the atomic bomb experiments got hot.

Operators are the U. S. Vanadium Corp. (Union Carbide & Carbon Corp.) and Vanadium Corp. of America which has close connections with Air Reduction Corp. U. S. Vanadium is the larger, having plants at Rifle, Durango, and Uravan, all in Colorado. Vanadium Corp. of America has plants at Naturita, Colo., and Monticello, Utah. Stocks of both companies had a day on the New York Stock Exchange soon as the bomb news broke.

All the above companies are involved in an antitrust investigation (BW-Jul. '45, p36). The main issue being examined by a federal grand jury in Denver is alleged agreements on production and pricing of vanadium but the question of control over uranium may well be a feature of the case before it has run its course.

**U. S. Methods Secret**—Method by which uranium is taken from the Colorado deposits is a war secret and so is

the amount of the production. The metal is exactly the same as that refined from Canada's pitchblende.

Uranium is usually delivered commercially as a salt or powder which is yellow or orange in color. As a metal it is white and slightly heavier than lead. Before the war the salts sold for \$1.50 per lb. The cost of U-235, the uranium variant which in its natural state is susceptible to splitting, has not been divulged but a chemist estimates that production of one pound would require \$30,000 for electrical power alone—providing the kilowatt rate was very cheap; after all, there is only one pound of U-235 to 139 lb. of U-238 in any given mass of uranium, and it cannot be separated out chemically, for both forms have the same chemical composition. It is for this reason of cost that "plutonium," which can be synthesized from U-238, is now regarded as the most likely source of atomic energy (page 22).

• **Available to All**—In addition to the U. S., Canadian, and Congo ores, there

are commercial deposits of uranium in Bohemia, Bulgaria, Madagascar, and Sweden. But low-grade deposits are so widespread that any nation (which would be allowed to get away with it) could develop the small amount needed for destructive warfare. No doubt the policing of uranium will be an early job for the United Nations security organization.

• **Used in Ceramics and Glass**—As Colorado's uranium is a byproduct of vanadium, Canada's is a byproduct of radium. Principal use for uranium in prewar commerce was as a colorant for ceramics and glass. It imparted a rich yellow or orange hue.

Commercial use was prohibited by WPB order M-285, in January, 1943. From then on most uranium went into those mysterious laboratories. But the restriction was relaxed later in 1943 to allow the use of several thousand pounds in the manufacture of amber signal lenses and in glass-to-metal contacts for radio tubes.

Before the war uranium demand and



In the far-off wilderness of Canada's Northwest Territories, just under the Arctic Circle, a few rough buildings on Great Bear Lake (above) make up the mining plant of Eldorado Mining & Refining Co.—biggest uranium producer in the Western Hemisphere. At Uravan, Colo. (below), U. S. Vanadium Corp. finds its vanadium tailings a handy—but less rich—source of uranium.





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prices had fallen to such a depth that a huge pile of uranium oxides had accumulated at the Eldorado radium refinery, Port Hope, Ont. Offers from foreign buyers (which now look more suspicious) were refused. Hence this accumulation was immediately available when the Allied nations started the \$2,000,000,000 bomb experiment.

• **Labine Found Source**—The man who refused the foreign bids was Gilbert Labine, Eldorado's president. As a young prospector Labine's imagination was fired by the determination to find a source of radium. Doggedly he fought his way through the Canadian wilderness searching for the radium-bearing black pitchblende. Success met him (1930) in a howling waste on the shore of the Great Bear Lake, just below the Arctic Circle.

Labine's mill at Great Bear Lake uses a chemical flotation process which allows the uranium concentrate to be skimmed off. From here the concentrate is shipped to the Port Hope refinery near Toronto. First it is pulverized, then subjected to acid digestion and finally to separation by fractional crystallization which produces the yellow uranium salt of commerce.

• **Canada Takes Over**—By 1943 Eldorado Mining & Refining, Ltd., was the world's principal producer. Because of the atomic bomb experiments the Canadian government placed sales of radium and uranium under permit control in February, 1943. Further, it reserved to the crown all future discoveries of radioactive substances in the Northwest Territories and the Yukon. In January, 1944, the government took over assets of Eldorado. The 3,905,000 shares were bought for \$1.35 each, the open market price.

The Securities & Exchange Commission is watching to see whether Canada's busy mining stock sharpshooters will capitalize the excitement over uranium by dumping more questionable mining paper in this country.

• **Congo's Deposits Biggest**—Congo operations started in 1921 in deposits still considered the world's greatest. Concentrates were brought for refining to Oolen, Belgium.

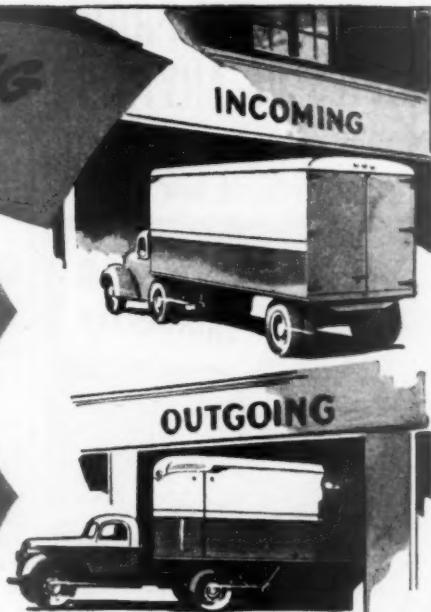
When the Germans overran Belgium in 1940, the crude material was shipped to the U. S. In 1939 our uranium salt imports were 1,439,324 lb., valued at \$1,197,786. As a sample, about 24,000 grams of uranium salt were produced in 1930 from 1,296 tons of ore.

Uranite deposits in Bohemia have been mined for hundreds of years. The U. S. continued to import therefrom until the richer discoveries in the Congo and Canada put the ores of Bohemia out of the running.

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## Six Million Homes

That is goal projected in Senate housing bill, designed to promote private building and to expand public construction.

The long-awaited housing bill which Senators Wagner and Ellender dropped into the lap of the Senate just before it recessed contains the official framework for the biggest housing program ever projected.

It is designed to stimulate the production of 1,200,000 homes yearly for the next five years, with federal subsidies totaling \$133,000,000. Private builders are cold to the proposition because of its heavy emphasis on public housing.

**• Conference Problems**—Based largely on the recommendations of the Taft subcommittee on housing and urban redevelopment, the Wagner-Ellender bill contains some minor differences which may be ironed out in conferences to be held between now and October.

The bill proposes the following program:

The National Housing Agency would be retained permanently to achieve flexibility and economy in administration.

Builders and investors would be provided with a continuous program of technical research, aimed at reduction of construction costs and improvement of housing standards. Periodic local surveys covering employment and consumer demands would be undertaken under NHA direction, to reveal investment opportunities, and to eliminate guesswork in construction.

**• Subsidy Contracts**—To encourage the housing industry to help in slum elimination, the NHA would enter into subsidy contracts with local authorities guaranteeing partial absorption of unavoidable redevelopment losses. Localities, together with private enterprise, would have full responsibility for their own slum-clearance plans.

Local agencies would take on the job of buying, clearing, and improving the land. To cover the difference between acquisition costs and the new use value of the land, the government would pledge annual contributions for a maximum of 45 years. The bill authorizes first-year contributions of \$4,000,000 with an increase of \$4,000,000 annually until the fifth year, when a \$20,000,000 maximum is reached.

**• Local Obligations**—Using this subsidy contract as security for local borrowing, localities would be expected to supplement interim federal loans of \$250,000,000 with \$500,000,000 of their own. They would also have to put up a

## Man With a Job of Work Ahead

Hugh Potter is the Houston (Tex.) lawyer and real estate developer who has been handed the toughest assignment in Washington at the moment—getting the maximum amount of construction work started that conditions will permit.

He has been named by War Mobilization Director John W. Snyder to head up a committee representing ten government agencies with which the equally loose-jointed construction industries have to clear their troubles concerning material and labor shortages, prices, wages, and other bottlenecks.

As chairman of the Home Builders Emergency Committee in 1941, Potter grappled with the acute shortages of war housing. Since then, close to 1,000,000 privately built units have been erected.

Potter is a past president of the National Assn. of Real Estate Boards, is president of River Oaks Corp., Houston, which undertook the huge residential project on Buffalo Bayou.



Hugh Potter

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# Ties that bind

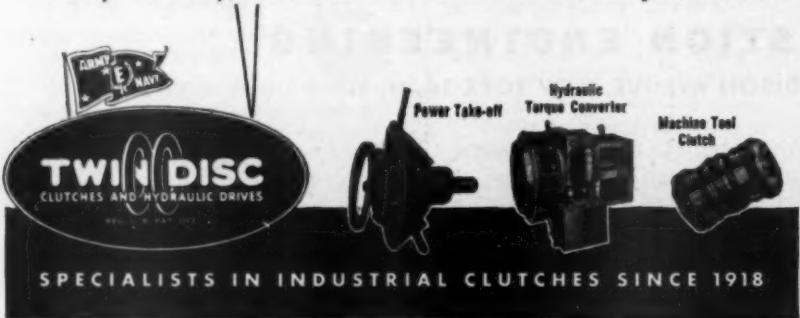
Coast to coast, it's 2,500 miles. Border to border, it's about an even 1,000 miles. Yet—thanks to the man at the throttle and the vast empire he represents—these far-flung United States form one vast community...each part and parcel of the same package.

Just as the railroads are the "ties that bind" a nation together, so, too, are the modern mechanisms which control and transmit power the "ties that bind" a nation's industrial might into one integrated effort.

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amount equal to one-half the government's annual contributions, which would never exceed two-thirds of development costs.

A revolving fund would be set up to provide an insured annual return up to 2½% to private investors in large scale rental projects on a 50-year basis designed to yield a net return of 3½%. If the yield goes over that figure, the return may be increased to 3½% by applying the excess over 3½% to increasing the return and the balance to amortizing the debt.

• **Tax Recommendation**—Representatives of the Taft subcommittee expect that the bill may be amended to incorporate another of their recommendations, calling for the reduction of a corporate income taxes which discourage equity investment in housing.

These provisions are intended to enable the private housing industry to meet a larger demand than ever before but "because experience has shown that public low-rent housing is necessary for our lowest income groups," the bill would expand the public housing program under the United States Housing Act and make public housing strictly noncompetitive by requiring 20% margin in rent and income between public and private housing in any locality.

• **New Appropriations**—To promote public housing projects, new appropriations of \$22,000,000 a year (for four years) would be added to the Federal Public Housing Authority's present authorizations and placed in a revolving fund, with the federal annual contribution period reduced from 60 to 40 years. Localities would be expected to finance 100% of the capital costs through private borrowing, using the subsidy as security.

Going beyond the Taft subcommittee's recommendations, the Wagner bill proposes two plans for dealing with the rural housing problem: a low-interest loan program, administered by the Secretary of Agriculture, for low-income farm families; and an adaptation of the public-housing formula of loans and annual contributions to rural families, in the total amount of \$25,000,000 for five years.

• **Preference for Veterans**—Permanent war housing built by the government would be sold as low-rent housing, with preference given to eligible servicemen's families.

The bill includes no mention of individual home financing, but federal housing administration officials hope to provide a more flexible credit system without specific legislation. One important improvement now being planned would allow builders to be accepted as mortgagors, thus permitting annual

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age agreements and better purchasing arrangements.

National Housing Agency spokesmen say that the Wagner bill's two main objectives are: (1) to encourage more builders to enter the low-cost, mass housing field, and (2) to keep a large volume of construction rolling two or three years after the war, when the most urgent wartime demands will have been spent.

## Diamond Rush

Retail sales of gems double in U. S. since war began. Prices of small cut stones continued to soar during 1944.

Sales of diamonds at retail have doubled in the U. S. during the war, says the Bureau of Mines in its annual review of gem stones. Prices of small cut stones have tripled or quadrupled since 1939 and continued to advance in 1944 when sales reached an all-time high.

**Dip Into Stocks**—Despite world production of 11,500,000 carats last year (80% industrial, 20% gem) compared with 8,351,867 carats in 1943, around 55% of the diamonds required by war industries in that year came from stocks mined before the war. As usual, the Belgian Congo produced most in 1944, some 7,540,000 carats.

Sales by the Diamond Trading Co., which in prewar times sold 95% of the world's production, were just over £17,000,000 worth of rough stones last year compared with £20,400,000 worth in 1943, the record year. Gem stones sales held up better than industrials, doubtless as a hedge against inflation.

**U. S. Production Drops**—U. S.-mined most valuable stones (mostly turquoise and quartz) used in jewelry were worth \$41,000 in 1944, a sharp drop from the \$67,000 in 1943, and \$150,000 in 1942.

The drop is accounted for by decreased mining for the stones because miners were producing strategic war minerals, by preoccupation of hobbyists on other activities, and the almost complete disappearance of tourists who buy most of them.

Chinese agents bought 5,890 lb. of Wyoming jade for postwar shipment to China. Colorado's King mines supplied most of the turquoise used in silver jewelry by Navajo and Pueblo Indians. Montana's sapphire mines, which produce industrial stones, were closed all year with the exception of the Perry-Schroeder Mining Co.'s pit at Helena which was worked for four and a half months.



## For tresses...and Fortresses

Lotion for her hair...fuel for the bomber...what possible connection could there be between these two?

What common denominator...for the tiny folding box with the bottle of lotion inside...and the huge corrugated container, for a giant reserve fuel tank?

Just this...both are paperboard products made by Flintkote.

Between the two...one 100,000 times larger than the other...you'll find a wide range and variety of other Flint-

kote containers. Each is designed and built for a specific purpose.

You'll find many sizes and shapes and finishes. Some glamorous...for shelf and counter and sales appeal. Some tough...to hold their own with rough handlers. Some protective...to keep moisture out, or in, as required.

That gives some idea of the versatility at your disposal...in designs, in materials, in manufacturing methods. So bring your packaging problems to Flintkote.

### Flintkote Makes Many Things

For immediate and future needs you'll find a broad selection of anti-corrosion coatings, paperboard containers, roofing materials, flooring, interior finishes, waterproofing compounds, adhesives, sound deadeners and absorbers, and building materials for new and existing industrial and residential buildings.

At Flintkote, versatility is the

planned result of special knowledge, skills, and experience gained through 44 years of painstaking research, careful manufacture, and practical application. It's always at your disposal.

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# FLINTKOTE

BUILDING MATERIALS, PRODUCTS FOR INDUSTRY, PAPER BOXES & CONTAINERS



## Fish on the Farm

Stocking and fertilizing ponds yield inexpensive food and other dividends in Alabama, Georgia, and South Carolina.

Alabama, Georgia, and South Carolina farmers are supplementing rationed menus with fish from fertilized and properly stocked ponds, which number more than 5,000 in those states. These farmers are catching from 500 lb. to 600 lb. of legal-size fish per acre of water the first year of stocking in a fertilized pond, at a low cost of 3¢ to 6¢ per lb.

Experiments in fish culture were begun at the Alabama Agricultural Experiment Station at Auburn, Ala.

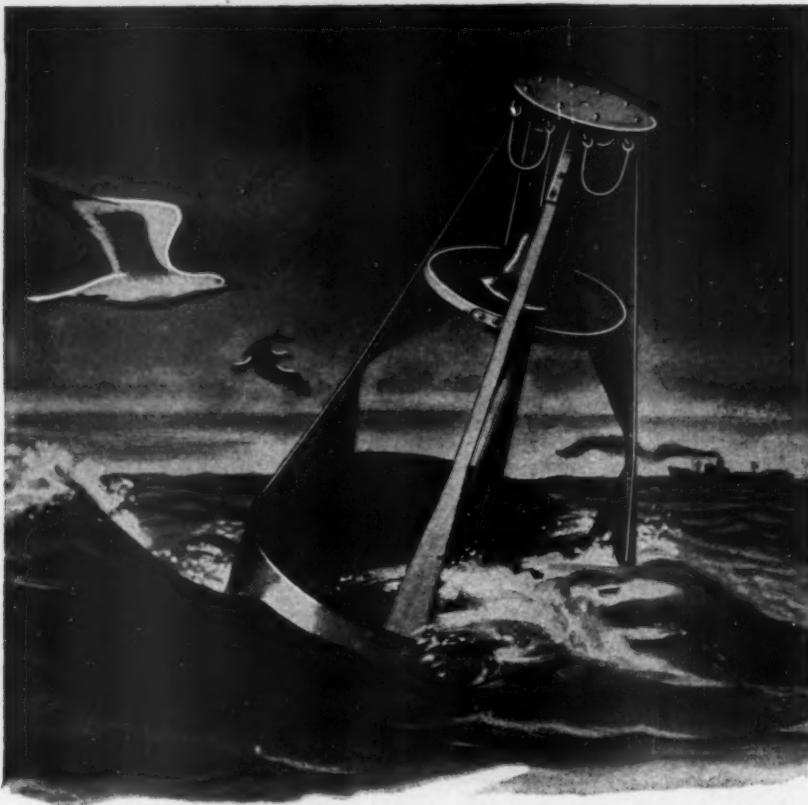
Unfertilized ponds up to two acres in size in Alabama were producing only from 40 lb. to 200 lb. of game fish per acre a year. Most of the ponds were filled with weeds which made fishing difficult or impossible, and acted as breeding and hiding places for mosquitoes. Dense weed growths also afforded protection to small fish so that the normal consumption of them by adult fish could not take place—hence ponds were overcrowded with small fish, and, because of insufficient food, few attained legal size.

• **Fertilizing Pays Off**—As a result of the experiments, farmers now apply 100 lb. of commercial fertilizer (formula 6-8-4) and 10 lb. of nitrate of soda per acre at each application. The necessary 10 to 14 applications a year cost \$15 to \$20 an acre.

Fertilization produces a microscopic plant growth which covers the pond and prevents light from penetrating to the bottom, thus retards the growth of unwanted vegetation. The microscopic plant life provides ample food for microscopic water animals, insects, and small fish which in turn provide food for game fish.

• **Free Fingerling**—Stocking a fertilized pond with 1,500 fingerling bream and 100 fingerling largemouth bass per acre brings best results. Bream reproduce rapidly and consume few of their young—bass feed on young bream and keep a balanced pond. Stocking with adult fish is not satisfactory as certain species become overcrowded and others may fail to reproduce.

• **Erosion Control Aid**—Many of the new ponds are being built on worked-out cotton fields which, if turned back to pasture, would sustain only 149 lb. of beef per acre compared with 500 lb. to 600 lb. of fish per acre at a much smaller cost.



# Sealed~~ TO MAKE SEA LANES SAFER

Safety is the word wherever men sail, and sealing keeps bell-buoys bobbing, day and night, to warn against unseen shoals.

You are sure of safety for vital bearings when you seal in their lubricants. National Oil Seals, built in the world's largest plants devoted entirely to problems of oil retention, do that job. National Seals not only keep lubricants from leaking—they keep out flying dirt, dust and abrasives of all kinds. That means longer life for bearings of all sizes. Millions of National Seals are now saving millions of dollars on trucks, tanks, tractors, passenger cars and in heavy industry.

Let a National engineer explain this up-to-date way of protecting oil and equipment.

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**NATIONAL**  
OIL AND FLUID SEALS



WHEREVER SHAFTS MOVE, THERE'S A  
NATIONAL OIL SEAL TO RETAIN THE LUBRICANT



*It won't be over till he's  
back from over there*



SIX tons of freight on the beachhead — and another ton coming through every month — that's what it takes to keep him and every other American fighter out there in the Pacific.

And this summer millions of others are on the way to join him — moving clear across the continent and halfway round the world to finish a gruelling, stepped-up job that demands

more and more help from all of us.

So day and night you are seeing the greatest westward movement of passengers and freight in history — a movement that, since victory came in Europe, has changed in direction but not in volume.

Passenger cars are needed for the fighters who *must* travel —

while every freight car must be loaded quickly, emptied promptly and hurried back to work.

The job is to "keep 'em rolling." The railroads still need the co-operation of shippers, of travelers, of the armed services, of the government — the superb cooperation which has so vitally aided in doing the toughest transportation job ever tackled.

To do their vital job  
**RAILROADS NEED MEN.**  
See any office of the  
Railroad Retirement Board  
or the U. S. Employment Service.



**AMERICAN RAILROADS**  
ALL UNITED FOR VICTORY

## Alcan Puzzle

**Peacetime future of highway built for defense of Alaska is uncertain, but abandonment of entire road is not expected.**

Built as a war measure when the Japanese were threatening the safety of our northernmost territory, the 1,522-mi., \$115,000,000 Alaska Highway, originally known as Alcan, faces a highly uncertain peacetime future.

• **Not to Be Abandoned**—Even the Public Roads Administration engineers who completed the highway in 1943 agree that it will not be attractive to tourists because of too few filling stations, camps, and eating places, as well as too many mosquitoes and too much dust from the gravel surface.

Alaskans add that it brings them no nearer the states and the northwestern states, whose chief spokesman is Sen. Warren G. Magnuson of Washington, are clamoring for a coastal route (box, page 34).

Nevertheless, the highway is not likely to be abandoned. And the reason is the same as the reason for building it in the first place—the defense of Alaska in the event of another Pacific war (map).

• **Maintenance Runs High**—Maintenance—and who is to pay for it—is, of course, a big problem. The international agreement between the U. S. and Canada which led to the construction of the highway provides that the U. S.

will maintain it for the duration of this war plus six months, but then what?

Joseph S. Bright, deputy commissioner of public roads, who supervised building the road after Army engineers constructed the pioneer trail, estimates that annual maintenance costs would be about \$700 a mile. He says Canada probably will want to maintain the stretch from Dawson Creek (at the southern end) to Fort Nelson (297 mi.) just as it does the regular road from Dawson Creek south to Edmonton and its big airport, because such roads give access to areas whose mineral wealth, timber, furs, and other natural resources have been only partially tapped so far.

• **Access to Skagway**—The northern two-thirds of the highway will be maintained, Bright thinks, because (1) it is a part of Alaska's road system; (2) with the Haines spur it opens the central and northern parts of Alaska to an all-year port at Skagway (important because of the glaciers along the coast north of Skagway); and (3) seaborne freight from Skagway moves easily by rail to Whitehorse where trucks can carry it south to Watson Lake along the highway.

Interior Secretary Harold L. Ickes gave the Alaskan section of the road a boost recently by opening 8,300,000 acres of federally withdrawn land along it to the public for development of mineral, timber, and other resources.

• **One Gap Remains**—Even such optimistic expectations leave one gap of about 340 mi. between Watson Lake and Fort Nelson that may have no peacetime economic value to repay

## POSTWAR PROBLEM

*Future of Alaska Highway, built to insure defense of Alaska, is in doubt*



maintenance costs. But for \$200,000 a year this gap could be maintained as insurance against a possible future war.

Freight shipments to Alaska by truck are not likely to be important because return loads are at best uncertain, and water transport is cheaper.

• **Planes Offer Competition**—Much of the tourist travel from the populous Midwest and East to Alaska is expected to be by air after the war, and even such auto tourists as there are may bypass the Alaska Highway by driving north from Portland and Seattle to Prince Rupert, B. C., then shipping their cars north to Skagway by water, thus avoiding miles of monotonous driving as well as enjoying the better facilities of the populated part of Alaska.

Sen. Magnuson got President Truman to say a few friendly words while he was visiting out in Washington, but it will be Congress that will decide if another road to Alaska—nearer the coast—is ever built. Critics of Magnuson's plan for a road north from Prince George to Whitehorse say it's only scenic, too foggy, and would need many expensive bridges. Montana's senators Murray and Wheeler, of course favor the existing road.

Future tourists on ships from Seattle and Vancouver can put autos ashore at Skagway to drive up into Alaska on the Haines spur, a roadway that for two years has been out of commission. This lateral road is 153 mi. long but only 37

## Rival Interests Clash on Seattle Navy Base

As in other Pacific Coast cities whose appetite for industrialization has been whetted by the profits of wartime activity, Seattle civic interests have been vigorously promoting the city's advantages as a business site.

• **Navy Base Proposed**—Last month this angling hooked a big one and at once the fishermen disagreed violently on the desirability of hauling it aboard.

The Navy proposed to make the city a permanent reserve base, berthing there 514 small ships of the minesweeper, landing craft, and patrol type, providing personnel payroll and work for the ship repair yards.

Site chosen by the Navy for the \$6,000,000 project was on the eastern

shore of Lake Washington, the freshwater lake which flanks Seattle for 20 mi. on the east. Its scenic shores cradle some of the smartest homes in the area; its boating and bathing facilities make the lake Seattle's playground.

• **But Opposition Arises**—Business interests voted jubilant approval, but the newspapers unleashed withering criticism. Readers joined in with a plea to save the scenery from unsightly rusting hulks, the water from oil and sewage.

The Navy cocked an appraising ear to the rival din, commented somewhat haughtily that it meant to shove nothing down Seattle's throat, began to explore alternative sites at Everett and Vancouver, Wash., and Portland, Ore.

# FORTY-FIVE YEARS

AUGUST THIRD was the forty-fifth anniversary of the founding of The Firestone Tire and Rubber Company. I remember how proud and happy I was five years ago when I recalled the many contributions which the men and women of Firestone had made toward the progress of civilization during our first forty years. But little did I realize the problems, the sacrifices and the suffering which the following five years were to bring.

On this occasion I want to pay tribute to the 14,000 members of the Firestone organization on the fighting fronts for their service to their country and to the 95,000 on the home fronts for their loyalty, skill and efficiency in performing many miracles of production and distribution so essential to the war effort.

When the tragedy and treachery of Pearl Harbor blasted our country into war and cut America off from its principal sources of rubber, the fruits of many Firestone pioneering achievements suddenly became vital to the very existence of our nation. The rubber plantations, established by my father nearly twenty years ago in Liberia on the west coast of Africa, became one of the few sources of natural rubber which remained open to the United Nations. The score of years which Firestone research men had spent in studying various types of synthetic rubber and learning how to use them gave our Company an advantage in "know-how" which we gladly shared with the Government and with the rubber industry.

On the day war was declared, we dedicated all of our resources, our manufacturing facilities, our engineering experience and our scientific skill to the cause of victory. Our existing factories were converted with all possible speed to the manufacture of war materials and additional plants were built or leased. For example, we erected in just fifty working days, a huge new plant in which to make Bofors forty-millimeter anti-aircraft guns. But before a single gun could be built, we had to translate hundreds of blueprints from Swedish into English and from the metric system to American standards. In record time we found the way to produce these guns quicker, stronger and at lower cost by making numerous changes in design and by the use of welding instead of rivets. Since then, more than thirty thousand have been built. They played a leading role in the defeat of the Luftwaffe and recently we received word from the Navy Department that these guns are the most effective answer to Japanese suicide planes.

Today, there are forty-eight Firestone plants in nineteen states and ten in foreign countries. From these fifty-eight Firestone factories comes a continual flood of war materials. In the past five years, we have produced millions of tires for military vehicles and combat planes. We have also built millions of tires for civilian cars,

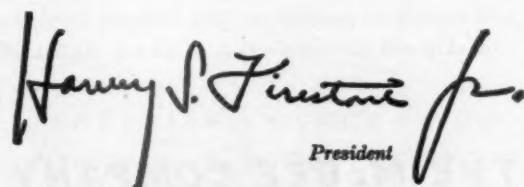
trucks, buses and tractors so essential on the home front for transportation and power farming.

Products of the Firestone plants have seen service in every theater of war from Oran to Okinawa. Life vests, life belts, gas masks, bullet-sealing fuel and oil cells, shatterproof oxygen cylinders and inflatable rubber boats, like the ones which rescued Captain Eddie Rickenbacker and his gallant crew, have saved countless American lives. Firestone barrage balloons have guarded cities and convoys. In General Patton's daring dash across France, many of his fast-moving tanks rolled on Firestone tracks and bogie rollers over Firestone bridge pontoons and fired their guns from Firestone-built turrets. Billions of machine gun bullets were fired from metallic belt links made by Firestone. Giant Curtiss Commando transport planes, flying on wings built by Firestone, have carried thousands of tons of precious cargo over the hump from India to China and, with Firestone-built gliders, have carried air-borne troops to their rendezvous with destiny behind the enemy lines in Europe.

These are a few of the different products we have made during the war from rubber, metals, plastics and textiles. Some of them are still secret, but I can tell you that Firestone bombs, mortars and rockets have wrought terrible destruction among our enemies.

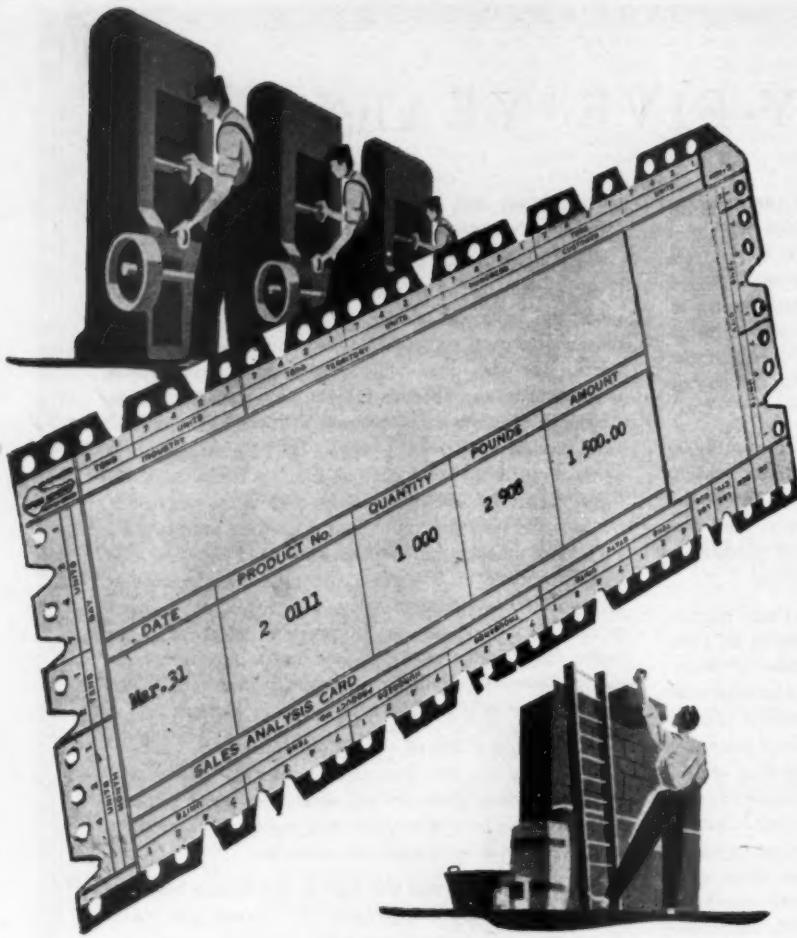
Our Company was the first in the rubber industry to win the coveted Army-Navy "E" Award, and many of our men and women have been paid high tributes by the Government and by professional organizations. Our chairman, John W. Thomas, for example, was recently awarded the annual gold medal of the American Institute of Chemists for his outstanding leadership in the American synthetic rubber program.

Yes, ever since the first day of war, we at Firestone have been all-out for victory. During the world-shattering events of the past five years we have learned many things which will, in the postwar world, enable us to make products of even greater quality and value than in the past. As soon as the Government gives the word, we are prepared to reconvert our factories from wartime to peacetime production. When that happy event occurs, there will come from Firestone hundreds of new and better products for a new and better world.



Harry S. Firestone Jr.  
President

THE FIRESTONE TIRE & RUBBER COMPANY



## This card *works...but HARD!*

From this *One Keysort Card*, the Brown Company is able to analyze sales:

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mi. are in Alaska; Canada, it is felt, might build its section of it in return for U. S. help in maintaining the uneconomic strip of the Alaska Highway between Fort Nelson and Watson Lake.

### Western Route Revived

There is renewed confidence in the Pacific Northwest that a western highway to Alaska will be built, extending north through and up from British Columbia (BW-Jun.17'44,p57), possibly from Prince George to Whitehorse. This is the road which interests in the West long have advocated.

The new confidence comes primarily from President Truman's expressions in favor of such a route when he visited Gov. Mon C. Wallgren of Washington in June. Subsequently, Wallgren appointed a committee of six to talk things over with Premier John Hart of British Columbia.

Pacific Northwest and British Columbia interests contend only a western route is commercially practical because Alaska's salmon activities are on the Coast, and the territory through which the highway would pass is rich in minerals, timber, grazing land.

In June, 1943, Hart agreed to have British Columbia furnish \$6,000,000 for such a road, provided the Dominion and U. S. governments would supply an additional \$12,000,000. This proposition fell through, however, and British Columbia now will use its \$6,000,000 to build a link from Prince George, B. C., to the present Alaska Highway at Fort St. John (BW-Jul.17'43,p50). The contract has been awarded. The primary purpose of this link will be to tap the wheat-rich Peace River territory around Fort St. John and Dawson Creek.

As a result of Truman's interest, there is a possibility that British Columbia, the Dominion, and the U. S. may get together on some type of cooperative financing for a coastal route. Hart plans to discuss the matter soon with Dominion officials in Ottawa. Meanwhile Sen. Warren G. Magnuson of Washington has reported that Truman will open negotiations with Prime Minister W. L. Mackenzie King of Canada, presumably when the tumult and shouting over the Pacific victory die down.

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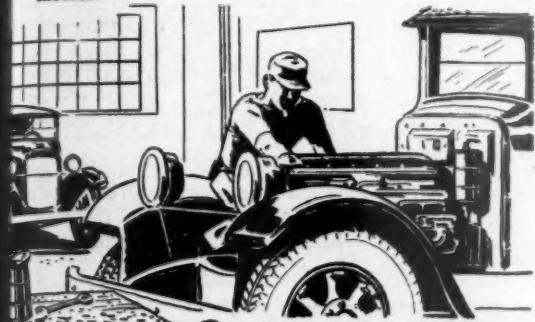
# There was nothing in Johnnie's way

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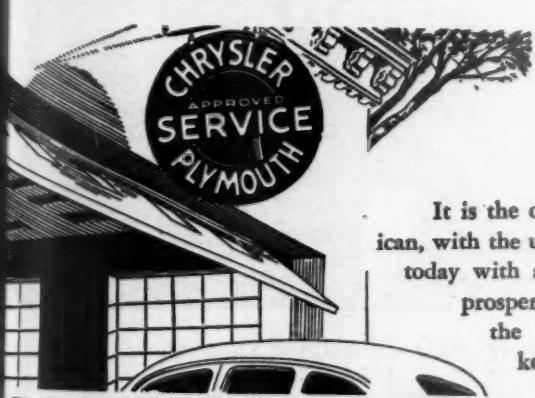
This is an actual case — a true story from the record of "Johnnie" in the files of the Chrysler Corporation.



1 When his father died in the first World War, Johnnie quit school; got a job in a war plant to support himself and his widowed mother.



3 Johnnie was smart, but he wanted more "education." He wanted to know all about engines and transmissions and everything that makes a car run. So he switched to a job in the shop, fixed cars and trucks for several years, soaked up "monkey wrench" knowledge and saved his money.



5 He got a job with a big Detroit car manufacturer; later became a Branch Manager. Johnnie spent ten busy years in this field, acquainting himself with retail selling and servicing. Then came another "hot" opportunity in 1944, to buy the business of a large southwestern Chrysler-Plymouth dealer. Johnnie says, "I'm still working my way through 'college' . . . and earning a pretty good income."



2 Johnnie always loved automobiles; kept dreaming about owning a business of his own some day. When the war was over he got a job selling cars and tractors for a local dealer. He liked it a lot, made more money than he ever had before.



4 His first big chance came in a nearby town where he became an automobile dealer. He did very well. Then he moved to a bigger town nearby. Then the depression hit him,—and Johnnie simply went out after more "education."

JOHNNIE'S success was, of course, well earned. It is the old fashioned kind of accomplishment, typically American, with the usual jolts and bumps on the way. Johnnie finds himself today with a substantial enterprise of his own. It will grow and prosper under his experienced direction. Johnnie's has been the kind of effort and intelligence which will help to keep America a land of real freedom and opportunity.

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**CHRYSLER CORPORATION**  
**PLYMOUTH • DODGE • DESOTO**  
**CHRYSLER • DODGE Job-Rated TRUCKS**

You'll Enjoy Chrysler Corporation Radio Program Thursdays, CBS, 9 P.M., E.W.T.



## This striking fact!

A 'Budgit' Chain Block of 2-ton capacity weighs only 81 lbs. No other 2-ton chain block weighs so little, and a 'Budgit' Chain Block is the only hoist of this capacity which can be picked up and carried from one load-lifting job to another by one man. This light weight is due to new design, the use of steel stampings and alloys.

With a 'Budgit', a man lifts capacity loads easily, quickly, safely! Anti-friction bearings throughout make this faster lifting possible. All working parts, including the automatic load brake, operate in grease in a sealed housing.

'Budgit' Chain Blocks are the first radical improvement in fifty years of chain blocks. How wise, then, to install them wherever loads must be lifted by hand.

'Budgit' Chain Blocks are built to lift up to  $\frac{1}{4}$ ,  $\frac{1}{2}$ , 1, and 2 tons. Prices start at \$59.50 list. Send for Bulletin No. 357 for more detailed information.



## 'BUDGIT' Chain Blocks

MANNING, MAXWELL & MOORE, INC.  
MUSKEGON, MICHIGAN

Builders of 'Show-Box' Cranes, 'Budgit' and 'Load' Lifters, Hoists and other lifting specialties. Makers of Ashcroft Gauges, Hancock Valves, Consolidated Safety and Relief Valves and 'American' Industrial Instruments.

## Crops Improve

August estimates revise the forecasts upward; Anderson is now happier over outlook for 1946 meat, milk, and eggs.

The weather man has smiled, the Dept. of Agriculture has boosted its crop forecasts, and Secretary Clinton P. Anderson is a little happier than he was a month ago over prospects for next year's production of meat, milk, and eggs.

The August estimate added 159,000,000 bu. to this year's laggard corn crop, 138,000,000 bu. to the biggest crop of oats of government record, and nearly 18,000,000 bu. to a record crop of wheat.

• **Near Record for Hay**—The crop forecasters add to the improved outlook a near-record 104,000,000 tons of hay, and they say the midsummer condition of pastures is the best in 30 years. Barley prospects improved, but sorghums for grain may fall 68,000,000 bu. short of last year's record 182,000,000 bu.

The corn estimate still falls nearly 400,000,000 bu. short of last year's record 3,228,000,000 bu., but this deficit is practically offset now by an estimated 1,546,000,000 bu. of oats, nearly

400,000,000 bu. more than the 1945 outturn.

Only a month ago the prospect for corn and oats combined was 300,000,000 bu. below last year's total, and the newly appointed secretary saw little chance of making good his promise of increased livestock production in 1946. • **A Rosier Outlook**—Now it looks as though the 1946 volume can match the year's record production of milk, the near-record laying of eggs, and come close to this year's 87,000,000 pigs. Further feed grain improvement would put practically all livestock products ahead of this year's figures.

One hazard to next year's livestock production remains—the possibility of an early frost that would lessen the feeding value of corn. This would stimulate winter livestock feeding, but act as a drag on sow breeding for 1947 spring pig litters.

• **Vegetable Oils**—The vegetable oil crops are coming through better than earlier expectations, with good yields per acre indicated for cotton, soybeans, flaxseed, and peanuts. Bigger imports of Argentine flaxseed also are in the oil picture, and some copra will surely come from the Philippines before snow flies.

Increases above the July forecasts are reported for practically all the food crops (excluding dry beans and dry peas).

Fresh vegetables are running a little ahead of last year.



## FOR A BRIGHT NEW WORLD OF BUSINESS

Aboard a Clipper, Paul Hoffman (left), chairman of the Committee for Economic Development, and Robert Gaylord, chairman of the National Assn. of Manufacturers, get right down to business on their way to London for the first International Chamber of Commerce meeting since the war. Called to formulate new peacetime policies for the resumption of trade, the meeting is attracting business delegates from most of the United Nations. Gaylord heads the production and distribution section under I.C.C.'s agenda, will be aided by Hoffman, and Eric Johnston, president of the U. S. Chamber of Commerce.

the 194

## West Coast Cars

Established auto makers plan to expand plants in area; export trade may be a major factor in future calculations.

The West Coast, eager to prove its growing industrial stature by means of postwar automobile production well above its prewar volume, is optimistic over its prospects.

One trump card in its deck is the planning of Kaiser-Frazer Corp. for output of a low-priced car, expected to make its appearance around the end of the year or shortly thereafter (BW-Aug. 4/45, p26). Others are the plans of already established automobile makers to enlarge their prewar facilities west of the Rockies.

**G. M. Construction**—General Motors announced late last week, for instance, that it will add 350,000 sq. ft. of space to its South Gate (Los Angeles) plant. Construction work begins later this month. Contracts have already been let for structural steel, conveyors, ovens, spray booths, and air-conditioning systems.

Operations at this plant will begin in September, when about 800 Chevrolet trucks will be produced. It will be the first time Chevrolet trucks have been built at this plant, a move dictated by the Army's lease of Chevrolet's Oakland (Calif.) plant. Assembly of Buick, Oldsmobile, and Pontiac cars will start at South Gate by December.

**In San Fernando Valley**—Beyond that, General Motors is negotiating for purchase of 125 acres of land north of Van Nuys, in the San Fernando Valley, on which will be erected a new plant to employ 5,000. If this deal goes beyond its present tentative stage, Chevrolets will be built there as well as at Oakland, where output was 50,000 vehicles in the last prewar year.

Ford is reported to be thinking in terms of a new West Coast assembly plant, in addition to postwar operations projected at Richmond and Long Beach, Calif. Chrysler is not believed to have any plans beyond the reopening of its Los Angeles factory.

**Independents' Plants**—With automobile demand expected to boom, the independent manufacturers' share may be better than their prewar proportion of the business. That engenders West Coast hopes that the plants operated by Studebaker at Vernon (Los Angeles), and Willys at Los Angeles will be busier than ever before.

The fortunes of body, parts, and accessory manufacturers are, of course,

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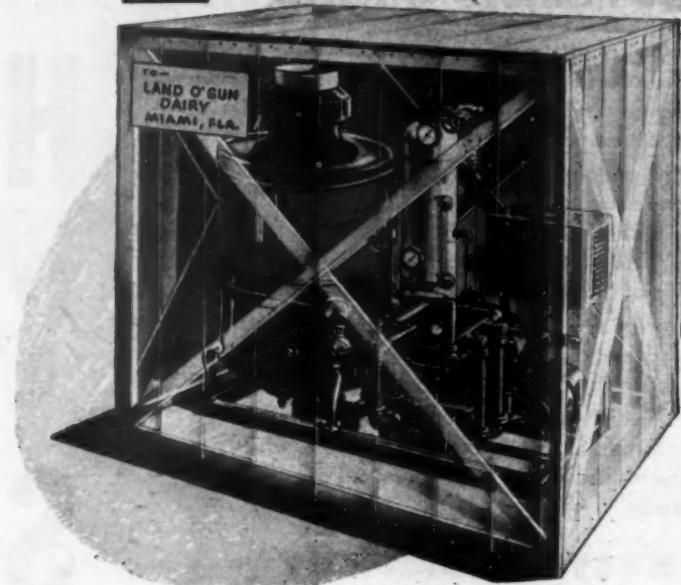
Builders of Hyster Industrial Trucks. World's largest manufacturer of tractor winches... Producer of cranes, winches, logging arches for "Caterpillar" track-type tractors... Sales and service offices in principal world cities.

### Pioneers in Materials Handling Equipment

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(2000 lbs. capacity) moving, stacking paper rolls.



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Clayton Steam Generators are made in six sizes, oil, or gas fired, 10 to 100 H.P. All are capable of operating pressures up to 150 lbs. p.s.i.

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linked closely with the output of these automobile manufacturers, and can be expected to share in their West Coast gains.

• **The Terms of Population**—The limiting factor in the West Coast automotive activity in the past has been the comparatively small proportion of the nation's population locked into its sales territory by the Rocky Mountains. Seven states comprise that area—Arizona, California, Idaho, Nevada, Oregon, Utah, and Washington.

In recent years they registered about 14% of the national passenger car total. On that basis, a 7,000,000-unit production year of cars and trucks, high tide in any automotive expectations, would result in sales of about a million in the West Coast marketing area. That total, split among four G. M. makes, three Ford makes, four Chrysler divisions, together with Studebaker and Willys—to say nothing of the new Kaiser-Frazer operations and of the scattered sales of other cars not manufactured in the area—spreads so thin that subsidiary operations are about all established auto firms envision for the Coast.

• **Important**—Nevertheless, those branch plant operations are important. In the last prewar year, the Los Angeles area alone produced 160,000 vehicles.

And, if China and India industrialize heavily during the decade after the war, export shipments might improve the position of the West Coast plants considerably.

## Steel Bows Out

Drops interest in Geneva but acts to enlarge facilities of West Coast subsidiary. Move adds to Kaiser's problems.

United States Steel Corp.'s renunciation of any peacetime interest in the Geneva steel plant this week all but dropped the \$200,000,000 war baby into the lap of Henry J. Kaiser—or of the projected Kaiser-Colorado Fuel & Iron Corp. steel empire now presumably in the making (BW-Jul.21'45, p15).

• **Sponge and Monkey Wrench**—Discouraged by opposition from government policymakers, with their hue and cry against "monopolistic eastern domination" of western steel facilities and their bald invitation to westerners to organize and operate Geneva themselves, Big Steel's directors tossed in the sponge.

But with the sponge went a monkey wrench, for U. S. Steel now plans to spend perhaps \$25,000,000 installing

# Sentinels of Safety!



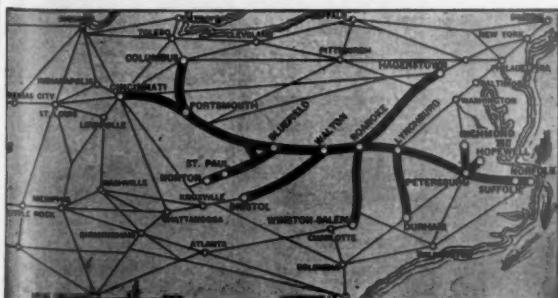
Every hour of the day and the night, freight and passenger trains are speeding over the heavy steel rails of the Norfolk and Western Railway. Track conditions are excellent... employees are on the job—alert, vigilant... electric signals wink their colored lights... traffic speeds swiftly toward many destinations. But there are other unsung and comparatively little-known watchers on duty—the electrified slide detector fences.

Scarcely noticeable along the right-of-way as trains flash by, these automatic guards for safety notify the crews of approaching trains if, when and where track obstructions occur.

On certain divisions of the railroad there are tunnel portals or deep cuts, where slides might occur during rainy seasons and send earth and

rock toward the tracks. But before reaching the tracks, the slides must first strike the detector fences, thus breaking the circuit of electric current which operates the signal system. The broken circuit places the signals in "STOP" position on both sides of the obstruction, and locomotive engineers proceed slowly, prepared to stop short of the obstruction.

The first slide detector fence on the N. & W. was erected in 1926. They have been developed and improved. Undramatic, yes, but since they have been in use these Sentinels of Safety have detected every slide that might have affected train operation on the N. & W.—a proven contribution to the safe movement of precious human life and vital freight.



## Norfolk and Western RAILWAY

PRECISION TRANSPORTATION

BUY MORE WAR BONDS

additional facilities at the Pittsburgh (Calif.) plant of its subsidiary, Columbia Steel Co.

• Add to Problem—Thus where many were wondering how the West could absorb the 1,280,000-ton steel-making capacity of Geneva and the 725,000-ton capacity of Kaiser's Fontana plant, both added during the past three years to war-expanded capacities of previously established mills, they now must deal with some 325,000 additional tons of cold reduced sheets and tinplate which Columbia will be able to turn out.

At the very least, this could hamper the program which calls for installing sheet and tinplate facilities to round out both Geneva's and Fontana's presently restricted line of products. And the picture would be worsened if Columbia's Torrance (Calif.) steel plant is also modernized, as is now being considered.

• Contingent Offset—As an offset to this disconcerting move, Big Steel did offer to negotiate the purchase from Geneva of a "substantial amount" of hot rolled coils needed to make sheet and tinplate at Columbia's plants.

But even this is contingent on the production of the hot rolled coils at Geneva (which would require additional equipment there), and on Geneva's being able to turn out the coils by the time Columbia needs them.

• Allen's Bid Stands—While still presumably dickering with Kaiser over the C. F. & I.-Fontana merger, Charles Allen, Jr., who heads the syndicate which recently acquired C. F. & I., doesn't want his company's bid for Geneva ignored.

Aside from such matters as raising the necessary money to take over Geneva and add such required facilities as sheet rolling and tinplating equipment, to say nothing of getting a market for its output, any deal involving Geneva is complicated by the fact that the Reconstruction Finance Corp., the government disposal agency, has no authority to sell the mill until plans for disposal are filed with Congress. (Such plans are not expected to be filed before October, at the earliest.) All it can do now is to lease the mill for not exceeding five years, without any option to purchase.

## Iced Car: 1945

**I.C. about to put a new refrigerator unit on the rails as its "answer" to those who would "yield" to airlines.**

Following close on American Airlines' experimental air freight plane load shipments (18,500 lb.) of fresh fruits and vegetables (BW-Jul. 21 '45, p19), the refrigerator car committee of the United Fruit & Vegetable Assn. came out fighting with blueprints for a bigger (20 tons of payload), lighter (21 tons), and—potentially—faster (60 m.p.h.) railroad refrigerator car.

The Illinois Central R. R. plans to start the first of the new cars about Sept. 1 in its McComb (Miss.) shops.

• After a Two-Year Study—In October the I. C. expects to put the car into ex-

perimental service, with other roads taking notes. The I.C. and other rail and produce interests cooperated in a two-year study to design the car. They hope that its combination of a steel framework and an aluminum alloy superstructure may overcome objections which have been raised to possibilities of higher upkeep expense on all-aluminum rolling stock. If tests are successful, other roads doubtless will build cars for themselves.

Major claims: Aluminum construction will cut 25% from average refrigerator car weight while permitting an inside length of 39 ft., 6 ft. longer than most reefers. Fiberglas insulation and improved air circulation will permit maintenance of temperatures down to 30 F for shipments of frozen foods. Collapsible ice-bunker bulkheads at each end add 6 ft. to inside length for return pay loads of commodities not under refrigeration. Longer springs provide a ride smooth enough even at 60 m.p.h. to prevent bruising and other rough-handling damage to such fragile fruits as ripe berries and tomatoes.

• Zone of Disagreement—Previous aluminum freight cars such as those recently built by Reynolds Metals Co. have cost roughly \$1,500 more than conventional cars of equivalent capacity. Skeptics like to point out that the carrying charge on the additional investment and the added amortization charge for depreciation could offset most if not all of the savings inherent in lighter weight.

A United States Steel Corp. study made to promote the use of its high-strength low-alloy steels for building lightweight cars indicates a saving of \$18 a year for each ton of car weight saved.

Some railroad men disagree, call this estimate mere theory. Loading factors vary with every train, they say, and accurate figures are elusive. Car builders now claim that life expectancy of both steel and aluminum cars is 25 years and that the upkeep costs are equal.

## NEW TOBACCO LEAF

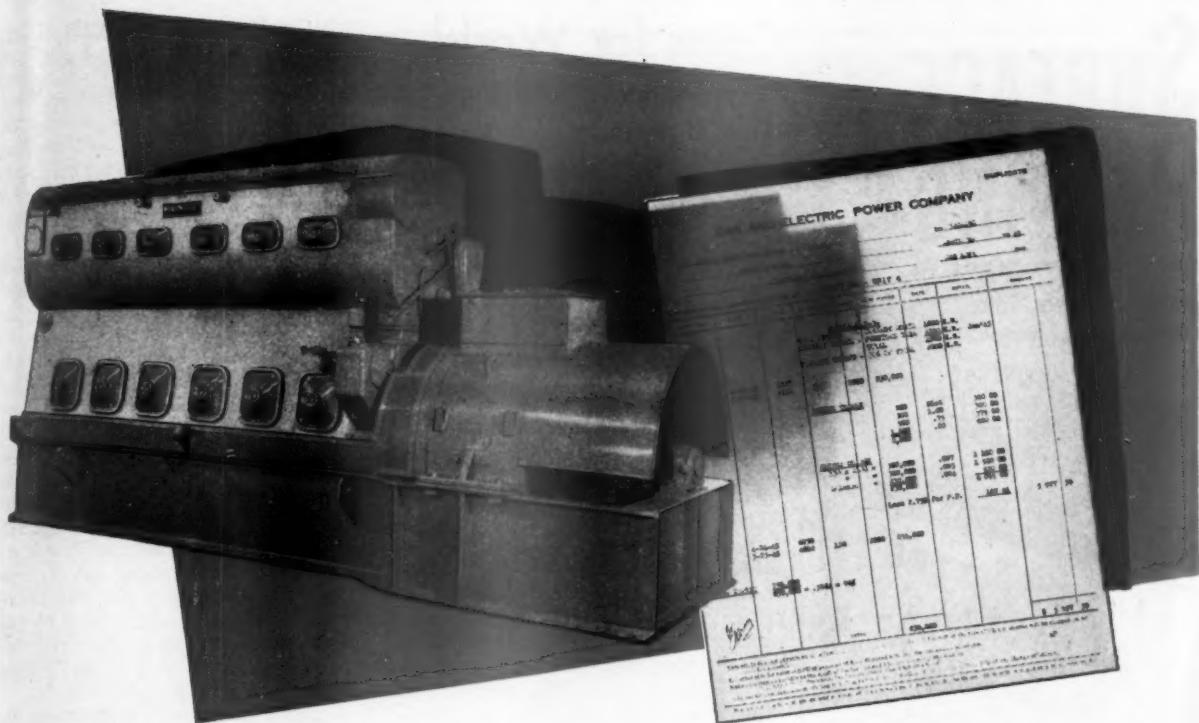
Visiting farmers at the University of Kentucky, Lexington, last week were shown a tobacco which experimenters said was "so low in nicotine that it doesn't irritate delicate throats and so aromatic that it can't be told from expensive Turkish leaf."

The new tobacco, grown on hundreds of test plots, was developed by scientists at the university's Agricultural Experiment Station, where research is pointed toward the development of tobaccos that are disease-resistant and strong enough to stand up under severe storms.

## West's Steel Capacity 4,814,000 Tons

Current iron and steel capacities of western steel plants, revised by Business Week from 1944 figures

Company	Steel Ingots and		Company	Steel Ingots and	
	Pig Iron	Steel for Castings		Pig Iron	Steel for Castings
Columbia Steel Co.			Oregon Electric Steel		
Ironton, Utah . . .	300	—	Rolling Mills		
Pittsburg, Calif. . .	—	417	Portland, Ore. . .	—	75
Torrance, Calif. . .	—	211	Northwest Steel		
Bethlehem Steel Co.			Rolling Mills		
Los Angeles . . . .	—	117	Seattle . . . . .	—	32
San Francisco . . .	—	235	Kaiser Steel Co.		
Seattle . . . . .	—	210	Fontana, Calif. . .	400	725
Colorado Fuel & Iron Co.			Geneva Steel Co.		
Iron Co.			Geneva, Utah . . .	1,150	1,280
Pueblo, Colo. . . .	750	1,200	Isaacson Steel		
Judson Steel Corp.			Works		
Oakland, Calif. . .	—	80	Seattle . . . . .	—	100
Pacific States Steel Corp.			National Supply Co.		
Niles, Calif. . . . .	—	86	Torrance, Calif. . .	—	46
			Totals . . . . .	2,600	4,814



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Here's what we mean. Perhaps your plant uses a fairly constant power load for running its machines, but for two or three hours each day uses a heavy peak load for additional lighting or machinery. You pay for power on the basis of *connected* load. If your normal power requirement is considerably lower than your maximum need, you pay a premium for *all* your power. By installing a Hendy Diesel-electric set to provide power for that

peak load, you can reduce the premium cost on all your power. Such an installation can be an important factor in lowering your costs, and who can doubt that in days ahead costs must be watched with an eagle eye? So now is the time to consider Hendy modern power units and how they can be applied to your requirements.

### Modern Power Units by Hendy Can Help You Cut Costs

Hendy has made important strides during the war in the design and manufacture of medium- and heavy-duty Diesels, Diesel-electric sets, steam turbines and turbo-generators for use in more than fifty industries. Write for literature describing these new products.

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EST. 1856

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for Improvement in Fatigue Life...



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Peening in that critical locality will generally work wonders—peening the local part only or the entire unit.

This peening is done by shot blasting—shot propelled by a wheel or by positive pressure air blast. The amount of the peening is carefully measured so that exactly the right amount is done.

The results have been an increase of 3 to 15 times in fatigue life—to such an extent that failures have stopped and parts, which would otherwise fail, have performed satisfactorily.

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May we discuss  
METHODS and EQUIPMENT  
with you?

**SLY**  
SURFACE  
PEENING

## Coins for World

One-third of total output of three U. S. mints in last fiscal year was for foreign customers. High demand will continue.

The three U. S. mints stamped 4,000,000 coins in the fiscal year ending July 1, an all-time record, compared with 3,066,487,270 the year before. About one-third was coinage made for foreign countries, an increase of about 40% this year. Mints at Philadelphia, Denver, and San Francisco worked 24 hours a day seven days a week, a wartime program they've been holding to for the past five years.

• **Demand Grows**—The huge demand for coins is caused by expanded business needs and, in the past ten years, has resulted in an output of coins for domestic use that totals 52% of all U. S. coins struck during the 153 years the mints have operated. Vending machines, turnstiles, sales taxes, merchandise prices in odd cents, and the growth of cash-and-carry stores have added to the need for coins.

The immediate future will see no letup in demands for coins, says Mrs. Nellie Tayloe Ross, director for the past twelve years. As private U. S. and world trade and foreign businesses resume operations, the need for coinage is certain to continue at a high level.

• **Foreign Customers**—Coins for foreign nations are made under a law of 1874 which provides that they shall be

made for foreign governments at cost, which ranges from \$1.50 a thousand coins to \$13.75 for Dutch 2½ guilder that use difficult alloys. These governments supply the die and, normally, the metal, but during the war both the State Dept. and War Dept. have necessarily approved foreign jobs as a matter of military necessity, even when some metals were short.

The military is unwilling to reveal current jobs for foreign countries, especially those in the Pacific, but other countries who ordered money included the Dominican Republic, Ethiopia, Greenland, Guatemala, the Netherlands, Peru, San Salvador, and Venezuela.

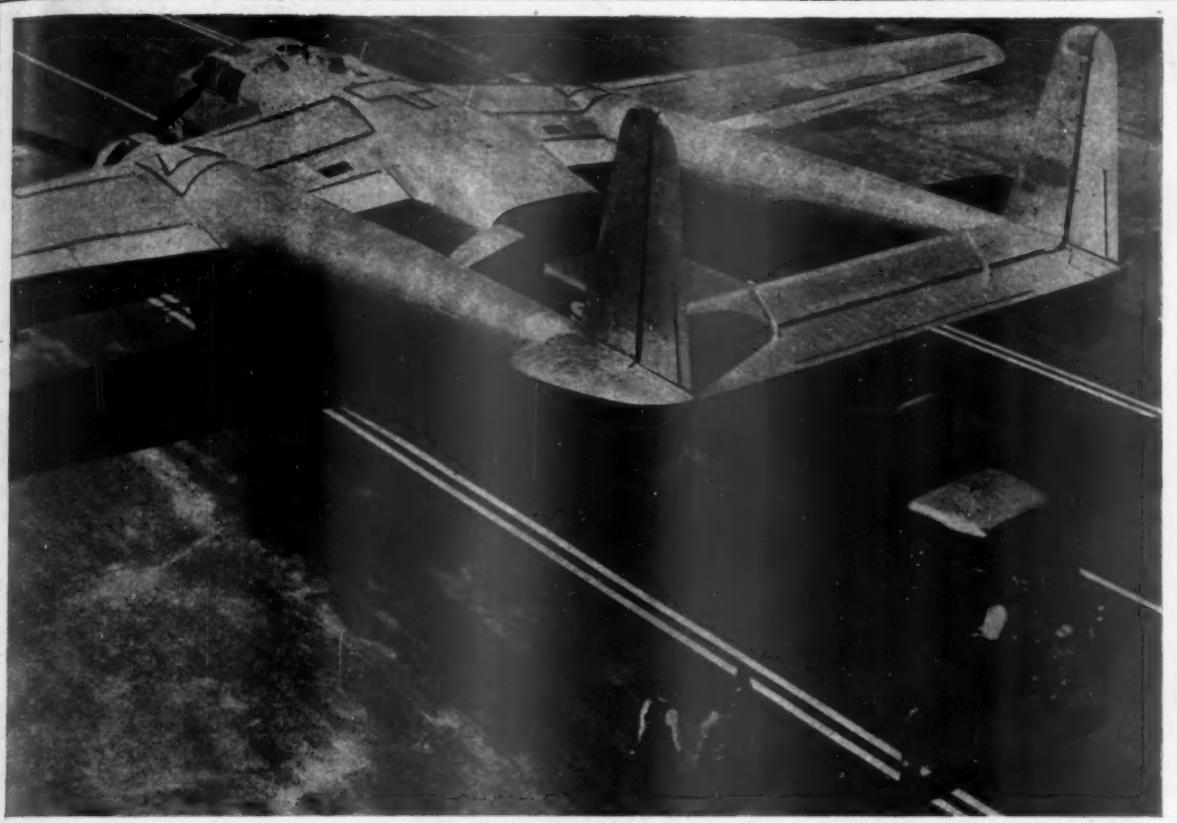
• **Penny Trouble**—Silver costs more to coin than other metals. But the coin that the U. S. mint had most trouble with was the U. S. steel penny which was as difficult to make as it was unpopular. Gradually going out of circulation as it blackens in use, the billion that was made is being replaced by copper pennies partly made from used shell casings melted down and partly from virgin copper that is again available.

A gossip columnist's report that the San Francisco mint was making Maria Theresa thalers to pay a Middle Eastern king for his oil—and thus supplying his little country with coins for nothing—is untrue. It arose because the famous old trade coin, carrying the portrait bust of Maria Theresa, Empress of Austria during the 18th century and mother of Marie Antoinette, has the initials S.F. on it. Mistaken for "San Francisco," they stand for Schobel, the mintmaster of the 18th century Gunzberg mint.

## What's Happening to the Cost of Living

	Food	Clothing	Rent	Fuel, Ice, & Electricity	House Furnishings	Misc.	Total Cost of Living
August, 1939.....	93.5	100.3	104.3	97.5	100.6	100.4	98.6
January, 1941*.....	97.8	100.7	105.0	100.8	100.1	101.9	100.8
June .....	105.9	103.3	105.8	101.4	105.3	103.3	104.6
June, 1942 .....	123.2	125.3	108.5	105.0	122.3	110.9	116.4
June, 1943 .....	141.9	127.9	108.0	107.7	125.4	115.7	124.8
June, 1944 .....	135.7	138.0	108.1	109.6	138.4	121.7	125.4
July .....	137.4	138.3	108.2	109.7	138.7	122.0	126.1
August .....	137.7	139.4	108.2	109.8	139.3	122.3	126.4
September .....	137.0	141.4	108.2	109.8	140.7	122.4	126.5
October .....	136.4	141.9	108.2	109.8	141.4	122.8	126.5
November .....	136.5	142.1	108.2	109.9	141.7	122.9	126.6
December .....	137.4	142.8	108.3	109.4	143.0	123.1	127.0
January, 1945 .....	137.3	143.0	108.3	109.7	143.6	123.3	127.1
February .....	136.5	143.3	108.3	110.0	144.0	123.4	126.9
March .....	135.9	143.7	108.3	110.0	144.5	123.6	126.8
April .....	136.6	144.0	108.3	109.8	144.7	123.7	127.1
May .....	138.8	144.6	108.3	110.0	145.4	123.9	128.1
June .....	141.1	145.4	108.3	110.0	145.8	124.0	129.0

\* Base month of NWLB's "Little Steel" formula.  
Data: U. S. Bureau of Labor Statistics; 1935-39 = 100.



Fairchild "Flying Boxcar." Cargo capacity, 2,870 cubic feet (93% as much as a standard railroad boxcar). Range 4,000 miles. Cruising speed 200 m.p.h.

## There were no "Flying Boxcars" in 1845

When Johnson & Higgins started business in 1845, sailing ships were in their glory, and commercial steamships still were regarded by many as experimental contraptions, with a dubious future at best.

Today the question is "What is the future of commercial aviation?"

Many manufacturers, shippers and airline owners foresee an enormous post-war development in this latest field of transportation. Contributing factors include improved pick-up and delivery service, development of local "feeder" lines to serve the larger skyway systems, specialized merchandising and packaging, and widespread public education.

Our business at Johnson & Higgins is not to promote any special form of transportation, but rather to be fully informed about *all* such developments so that we may intelligently advise our clients concerning their insurance.

To owners and users of air transport facilities,

we offer our service as buyers and advisers in the field of *aviation insurance*. We have the organization and experience for the same service in every form of business insurance—marine, fire, casualty and surety, group life and pensions, etc. For 100 years we have acted as intermediaries between business interests and the insurance companies, representing the former in planning and negotiating their insurance programs—at no additional cost and with "no axe to grind, but yours." Information on request from any one of our offices.

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...or Junior...  
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**WE DO KNOW** that for over 20 years the Oregon Journal has "got down on the floor" and out on the playground and had fun all over the Oregon Country with more than 600,000 boys and girls known as the Oregon Journal Juniors.

The Journal Juniors is a purely voluntary organization. No subscription to The Journal is demanded. There are no dues, no special incentives offered. The boys and girls join because they want to, because the Journal Juniors is *their* organization!

During the past 20 years more than 600,000 boys and girls have been enrolled as Journal Juniors. This year there are over 50,000 active members. They and their families become loyal Journal readers. To them, the Oregon Journal is more than a newspaper; it is a welcome friend in their home. This intimate reader relationship definitely enhances The Journal's value to you as an advertising medium.

Fun for both The Journal and the Juniors includes a daily column in the paper, model airplane races, dramatics, collectors' clubs, baton twirling, dancing, model boat racing, Victory Gardening—and these are only a few!

Grand climax to each week of Journal-Junior activities is the Saturday morning KALE radio show put on by the youngsters themselves. They tap dance, tootie horns, play the piano, act, yodel and just sing—all the exciting and occasionally remarkable things children like to do.

The Oregon Journal Juniors is one of many distinctive features that have made The Journal grow into the hearts and lives of the community it serves. Little wonder that The Journal continues to be Portland's favorite newspaper, offering advertisers the largest circulation in its history, both daily and Sunday!

.....

**THE JOURNAL**  
PORTLAND, OREGON  
*Afternoon and Sunday*

**Member . . . Metropolitan and Pacific Parade Groups**

Represented by REYNOLDS-FITZGERALD, Inc. New York, Chicago, Philadelphia, Detroit, San Francisco, Los Angeles

which first made such coins, and Faby, his mintwarden.

• **Task in Germany**—Currently the Mint has its assistant director, Leland Howard, and two experts in Frankfurt, Germany, inventorying the gold and silver loot captured in a salt mine by the U. S. Army. They are assaying and weighing it and trying to identify the owners.

## CITIES CONTROL TAXIS

Oregon cities, in a three-mile radius beyond their limits, have exclusive jurisdiction over taxis and buses of not more than seven-passenger capacity.

This jurisdiction, established earlier this year by the state legislature, has been declared legal in a ruling by the Oregon attorney general, who studied the law at request of the state utilities commissioner.

The law was passed at insistence of the Portland city council, which sought to combat excessive charges in taxi fares to outlying districts. Mainly the overcharge complaints were from servicemen.

Under the new law buses of more than seven-passenger capacity cannot be licensed by the state commission to operate solely within a city unless the city consents.

## MORE COTTONSEED OIL

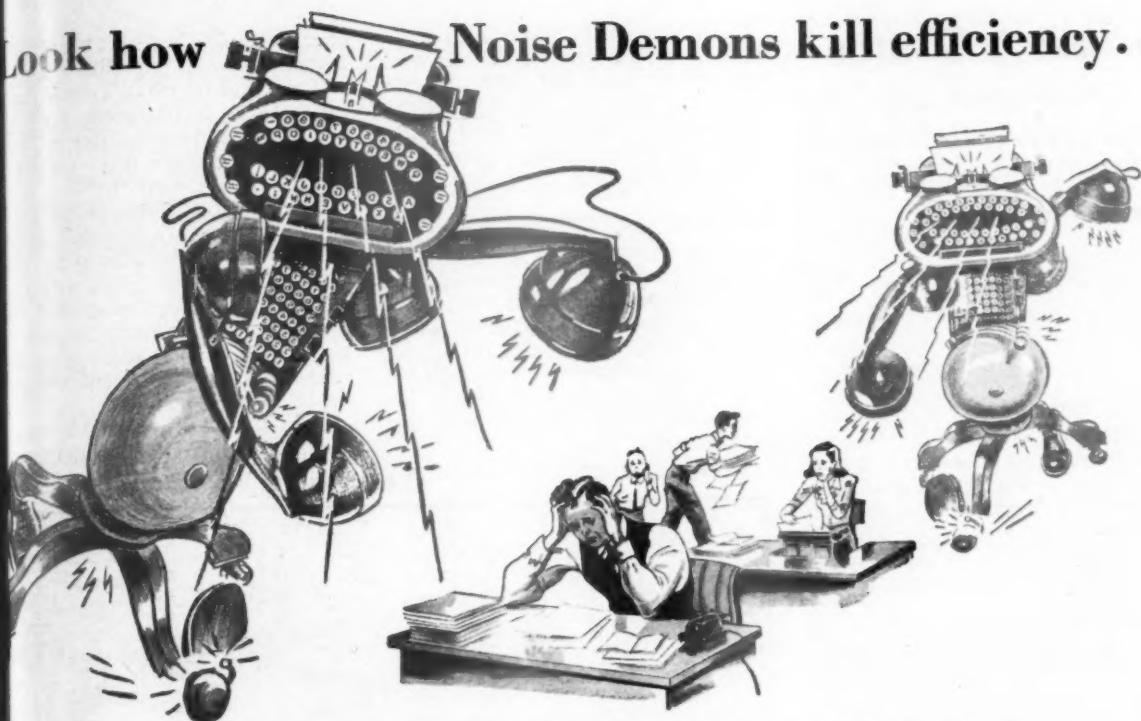
Increased rations of margarine, shortening, salad oils, and other scarce items made from cottonseed oil are possible as the result of a cooperative engineering research project of the University of Tennessee and the Cotton Research Committee of Texas.

Study of the best conditions for cottonseed mill operation revealed that new pressing methods could increase the nation's supply of cottonseed oil by about 8% without any expansion in cottonseed supplies. At the same time, millions of dollars a year would be added to the income of cottonseed mills.

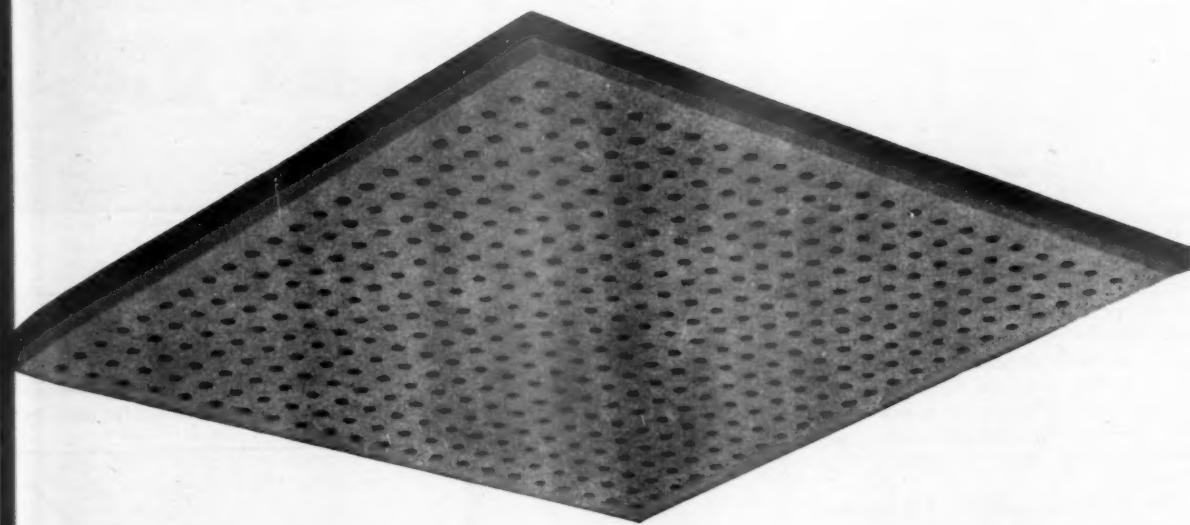
The research was done by William Baskerville, assistant director of the University of Tennessee Engineering Experiment Station, and A. Cecil Wamble, associate director for cottonseed of the Texas research group. Baskerville worked on the project with a cottonseed oil pilot plant at the university and Wamble experimented in eight southern commercial oil mills.

The new method is merely a matter of increasing the time that most oil mills have used in pressing the oil out of cooked cottonseed meats. The researchers found that the maximum amount of oil was obtained by increasing the pressing time 50%—from 30 minutes to 45 minutes.

## Look how Noise Demons kill efficiency...



## Look at the ceiling that kills Noise Demons...



## It's Armstrong's Cushion-tone!

**ERRORS MULTIPLY** and work piles up in an office that's overrun with noise demons. These pests hamper concentration, use up energy, destroy business efficiency.

Noise demons are born in the ceaseless din of clattering machines, loud voices, and strident bells. But there's one sure way to

end them—an economical ceiling of Armstrong's Cushion-tone.

The 484 deep holes in each 12" square of this fibrous material trap and kill noise demons—absorb up to 75% of all noise striking the ceiling. Cushion-tone is an excellent reflector of light, and it can be repainted without decreasing its

high acoustical efficiency. In addition, it makes an attractive, decorative ceiling for offices.

**NEW FREE BOOKLET** gives all the facts. Write for your copy to Armstrong Cork Company, 3008 Stevens Street, Lancaster, Pa.



# Cellulose Source

**Whole cotton plant used in experiments which southern scientists believe holds real promise for industry.**

Experiments have convinced a group of southern chemists that the whole cotton plant may prove to be the cheapest source of cellulose for the paper, rayon, artificial leather, and other industries.

Cotton lint—the fiber normally used in textile production—is almost pure cellulose, but the cost is too high to permit its use by most cellulose industries. Linters, the short fibers cut from the seed after the lint has been removed by ginning, also are nearly pure cellulose, but again use is restricted because of relatively high cost.

• **Cutting the Cost**—Taking the whole cotton plant, however, gives cellulose production a new economic aspect. Whole cotton, usually cut about four inches from the ground, can be processed to remove the oil, then delivered to the pulp mill at no cost other than handling charges.

Cellulose is the chief constituent of the cell walls of all vegetable cells. Whole cotton yields about 45% of its weight in pure cellulose, which led Dr. Frank E. Cameron, professor of chemistry at the University of North Carolina, to report this week that prospects for commercial development "appear to be real."

• **What Is Involved**—Dr. Cameron believes that several factors will make whole cotton more economical than any competing source of cellulose. Principal item in preparation of whole cotton, aside from oil extraction, is grinding, and this costs no more than the barking and chipping of wood. The wood of the cusps and stems is pulped easily, and less bleach is required than for wood.

The oil is extracted with a solvent instead of by a cold press, and processing of the residue for alpha-cellulose is different from the ginning and kier boiling of lint.

• **5,000 lb. to Acre**.—Much of the earlier work on whole cotton was done by Nicholas W. Dockery of Rockingham, N. C., who reported a cost of \$15 to \$16 an acre for growing and harvesting, excluding only rent for the land. Later experiments have justified this cost. On the average, a yield of about 5,000 lb. of dry whole cotton an acre can be expected. A marked reduction of harvesting costs is expected to result from mechanization.

Generally, whole cotton is a mixture of 20% stems, 20% cusps, and 60% seed cotton. Stems and cusps are wood, containing cellulose and the usual accompanying substances. Seed cotton comprises lint—an almost pure alpha-cellulose—and seed meat surrounded by hulls.

• **Processed Like Wood**—Cellulose may be obtained from whole cotton by any of the procedures used in treating commercial woods. The percentage of cellulose in whole cotton has been found to vary from 45 to upwards of 55. Cellulose from whole cotton and from lint, stems, and cusps separately has been found to differ in no way from that obtained from wood.

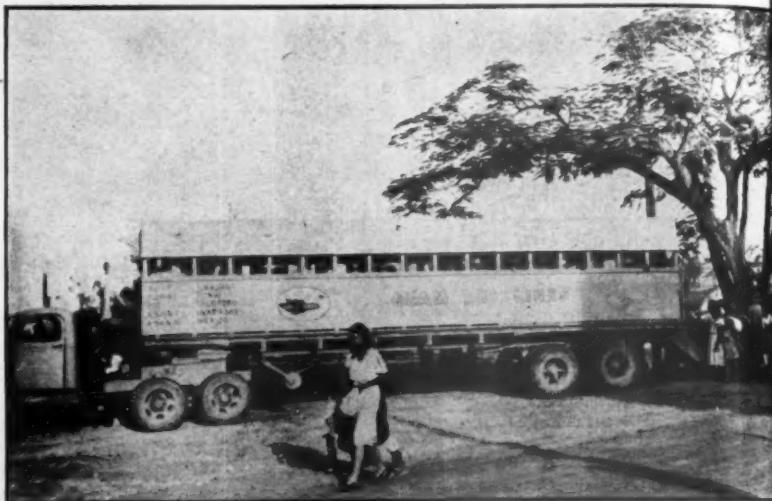
Dr. Cameron says whole cotton may

offer economic advantages to areas where cotton is now an unprofitable crop.

The stand of whole cotton may be harvested as is commonly done with hay, and a combined cutting and baler device is obtainable from manufacturers of farm machinery.

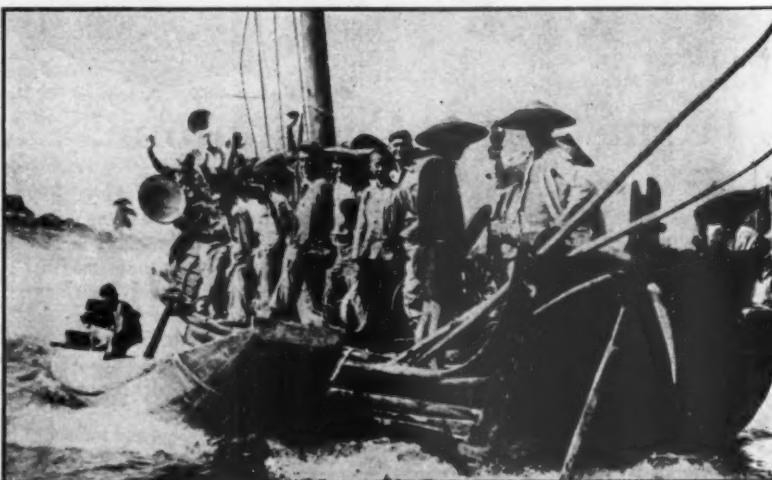
• **And So to Cellulose**—First step in processing of whole cotton is to grind it, thus breaking the seed, woody stems and cusps into small pieces with a large increase in surface. The ground whole cotton is kept for several hours in contact with a warm solution of an alkali so that coloring matter and other substances may be removed.

Then the oil is removed by treating the mass with a fat solvent. From the degreased solid residue, any remaining



## NOW THEY KNOW WHAT THEY WANT

Having tasted the sweet together with the bitter fruits of "civilization," the Orient is undergoing a change in methods and pace. In Guam, where ox carts were once the chief means of conveyance, huge buses (above), converted from Army trucks, now race over military roads. And in China, the G.I. use of outboard motors on sampans and junks may create a future market for such units.



solvent is removed by steaming, although this is not necessary, because the residue may be pulped by any of the standard procedures. The residue is washed with a dilute aqueous sodium hydroxide, which removes coloring substances, degraded cellulose, remaining traces of sugar, and the like. The residue is then bleached, and the bleached mass—washed—is pressed into the conventional sheets or simply dried into a fluffy mass.

## Crab for U. S.

**Government-backed firm in Seattle outfits floating cannery to wrest crabmeat monopoly from Japs in Alaskan waters.**

American knowledge about canned crabmeat has been limited pretty much to the taste of the delicacy. Until the war at least, catching and canning the Alaskan king crab have been almost a monopoly for the Japanese.

**End in Sight**—Now the end of that monopoly is in sight. Next summer, the Pacific Explorations Co., a new Seattle firm with strong government backing, will launch a large floating cannery and five trawlers in Alaskan waters.

Pacific Explorations Co. plans to catch the giant Alaska crab in the Bering Sea. The crab will be canned at sea and brought to the United States for distribution.

With the same equipment, the company also will fish for flounders and cod. The bottom fish will be filleted and frozen on the floating cannery. During the winter, the fleet will fish for tuna off the west coast of South America.

**ODP Equipment**—The Office of Defense Plants has made \$2,000,000 available for the operations. The money will be used primarily to provide equipment, which will be owned by the ODP and leased to the firm.

The 8,800-ton freighter Mormacrey, provided by the federal government, will serve as the floating cannery. It is being converted at the shipbuilding plant of the Bellingham Iron Works, Bellingham, Wash. It is expected that the conversion work will be completed next December, which would make the vessel available for spring fishing.

The five trawlers will be of steel construction. They will be 100 ft. long, 36 feet wide, and 14 ft. deep. It is expected that they also will be built in time for spring fishing.

**Friend of Truman**—President of Pacific Explorations Co. is Nick Bez, head

of several fishing companies in Seattle and Alaska. Bez is a close friend of Gov. Mon C. Wallgren of Washington, and is on friendly terms with President Truman. When the President visited Wallgren at Olympia in June, Bez's picture appeared in newspapers rowing the boat in which the President and Gov. Wallgren went fishing on Puget Sound.

Vice-president of the company is L. S. Christey, who spent eleven years with the U. S. Fish & Wildlife Service.

**Waters Surveyed**—The War Food Administration also is interested in the project as a source of food. So is the Fish & Wildlife Service, which in 1940 conducted an expedition to the northern coast of Alaska to locate commercial sources of king crabs and to demonstrate what opportunities there might be for private capital in the canned crab meat business (BW-Dec. 14 '40, p39). The idea then, as it is now, was to get this country into the competition. But diplomatic considerations at that time dictated a cautious approach.

Before the war about 95% of the crabmeat consumed in the United States was imported, most of it from Japan, and the rest from Russia and Canada. (Imports from Japan between 1931 and 1940 cost the U. S. more than \$27,000,000.)

**May Extend Limit**—The fishing grounds in which the Pacific Explorations Co. will operate in the north overlie the continental shelf off the coast of Alaska. Presence of the Mormacrey as a floating cannery along the continental shelf legally would establish

American rights to the fishing grounds.

This would make it possible for President Truman later to extend the three-mile limit to the edge of the shelf and to prohibit fishing by other nations, according to Sen. Warren G. Magnuson of Washington, who has assisted in Pacific Explorations' negotiations with the government. According to Magnuson, the President has indicated that territorial limits might be extended by proclamation for the protection of American fishing rights.

**Rights at Stake**—The success of Pacific Explorations will depend, in large measure, on the extent to which other nations are denied access to the king crab's playground. Pacific Northwest fishing experts point out that crab fishing on a commercial scale is a comprehensive and difficult operation and that under normal conditions foreign nations, paying lower wages to fishermen and cannery workers, would have a great advantage over an American company.

## AIRLINE STUDY OFFERED

The University of Denver is offering courses leading to baccalaureate and master degrees, with the major in the science of airline operation.

Courses, arrived at after consultation with officials of 13 major airlines, include airline practices, geography, and economics, general business, and personnel management. Officials and employees of Braniff, Western Air Lines, and Continental Air Lines supplement the university faculty as lecturers.

## Army-Navy E Awards at Third Anniversary

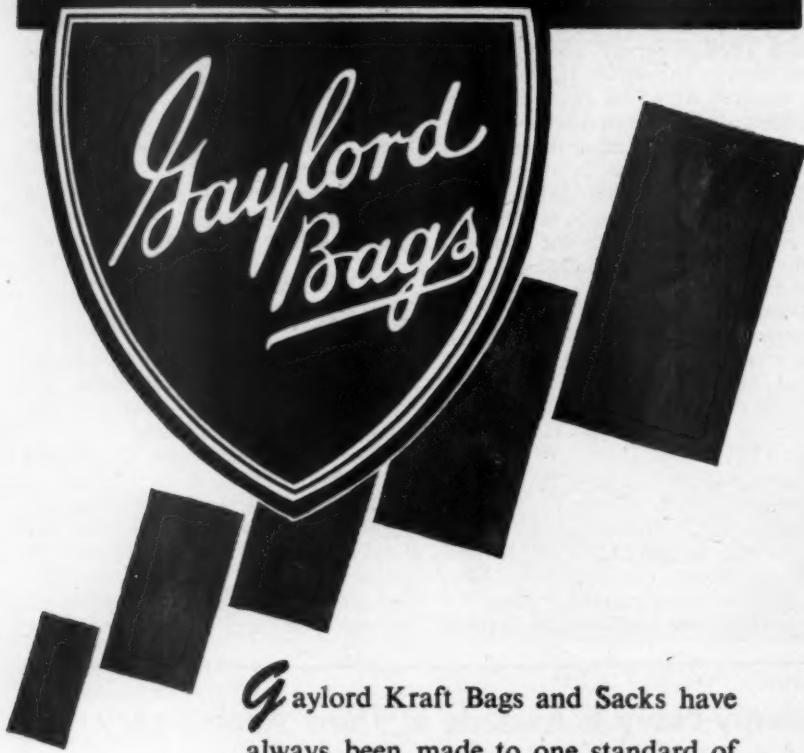
On the third anniversary of the presentation of the first Army-Navy E Award, Aug. 10, the award had been granted to 4,044 plants. Of these, 2,782 were nominated by the Army, and 1,262 by the Navy.

Now, at the war's end, pending nominations will be acted upon at a meeting of the joint awards board Aug. 27. It is expected that consideration also will be given to continuing the award system for excellence in peacetime military production. It is estimated that, since its establishment, about 41% of the nation's war plants have received the award.

Appliance Mfg. & Supply Co., Inc., Brooklyn, N. Y.	General Motors Corp. Pontiac, Mich.	The Ohio Boxboard Co. Rittman, Ohio
The Bodine Corp. Bridgeport, Conn.	Hamelco Port Chester, N. Y.	Phoenix Mfg. Co. Catasauqua, Pa.
Bulova Watch Co. Woodside, N. Y.	Forrest A. Heath Co., Inc. Denver, Colo.	Reading Air Chutes, Inc. West Reading, Pa.
Champion Canvas Supplies Linn, Mo.	Holsclaw Brothers, Inc. Evansville, Ind.	Rowe Mfg. Co., Inc. (Two Plants)
The Corbitt Co. Henderson, N. C.	Master Mfg. Co. Hutchinson, Kan.	Timpco Brothers Denver, Colo.
Croissant Machine Works Reading, Pa.	J. G. Menihan Corp. Rochester, N. Y.	Warren Leather Goods Co. Worcester, Mass.
Dienelt & Eisenhart Philadelphia, Pa.	L. J. Mueller Furnace Co. Milwaukee, Wis.	Wright File Co. & Wright Engineering Co., Lisbon, Ohio

(Names of winners of the Army-Navy and Maritime Commission awards for excellence in production announced prior to this new list will be found in previous issues of *Business Week*.)

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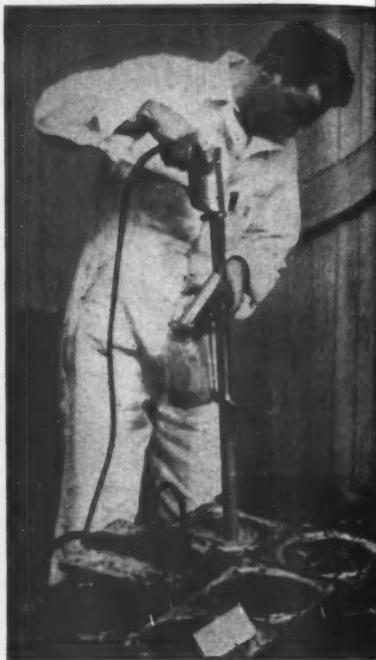
CORRUGATED AND SOLID FIBRE BOXES... FOLDING CARTONS... KRAFT  
GROCERY BAGS AND SACKS... KRAFT PAPER AND SPECIALTIES

## Sheep Subsidy

Growers will get payment ranging up to \$3.15 a cwt. for heavy lambs, replacing former 95¢ rate to slaughterers.

A year ago domestic sheep flocks, despite government-paid ceiling prices for wool, had dropped to 45,000,000 head—the lowest since 1942's 50,000,000 head—as the lamb and mutton market boomed.

Alarmed growers got the Commodity Credit Corp.'s promise of extension of the wool purchase plan to June 1946, and at Ft. Worth last February resolved to fight for readjustment of lamb prices to meet rising production costs, and to propagandize wool into



## SHARK SAMPLER

Fishermen have long accepted a flat price for shark livers—main source of the nation's vitamin A—and have lost a part of their profits. Now the industry uses an electric auger (above) to take samples right on the boat or dock to test for vitamin potency, the all-important factor determining price. Developed by the U. S. Fish & Wildlife laboratory at Seattle, the drill secures a hundred samples in a few minutes. Thus fishermen don't have to wait for tests or lose out on price.



## Sure-fire relief for plant "trip" grief!



**SAFETY-SURFACE.** Careycrete's texture provides a smooth yet non-slip, non-skid traffic surface.

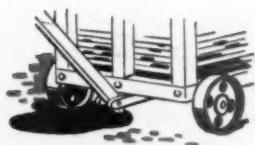


**NATIONWIDE DISTRIBUTION—** Warehouse stocks of Careycrete provide prompt service regardless of job location.

**Careycrete** smooths out accident-inviting holes and breaks in factory floors—fast and for good. It's easy on worker's feet . . . quiets traffic noise . . . outlasts concrete.

Careycrete is an ideal safety-surface for old floors or new. It won't crack or chip. Many of the country's largest industries use it.

Carey will resurface your floors or instruct your own maintenance men on how to do it. Consult your nearest Carey Branch for information or write—



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Farquhar 300-Ton Vertical Hydraulic Press

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leading postwar textile position (BW, Feb. 10 '45, p24).

• Army to the Rescue—The growers' representatives forthwith came to Washington. With them they brought a tariff commission report of last January showing that wool growers were losing money because of high-priced labor as well as the competition from foreign fiber.

The resurgence of Army orders for worsteds and woolens saved them breath. Wool consumption this year is expected to remain at last year's record 1,000,000,000-lb. level. Government officials cheerily predicted that all existing stockpiles, as well as this year's clip, would find a market.

• Subsidy for Growers—Meanwhile, the lamb and mutton picture became gloomier as growers, continuing a trend

### Steel Patent Case Dismissed

Royalty payments on processes for cold rolling steel loomed this week as a prolific source of controversy within the industry as a result of the dismissal of the government's civil fraud suit against the Cold Metal Process Co. of Youngstown and the inventor, Abram P. Steckel (BW—Oct. 2 '43, p56).

• Federal Judge Shackelford Miller of Louisville dismissed in entirety the case brought by the Dept. of Justice in September, 1943, which charged that patents on continuous, precision rolling were obtained by fraud and conspiracy. Because it had an interest in the price of steel strip, by virtue of vast war procurement contracts, the government at the same time ordered Cold Metal licensees to pay no further royalties.

The amount involved is indicated by a 1940 agreement in which United States Steel Corp. abandoned a legal fight against the validity of the Steckel patents and settled for their use up to that time with the payment of \$3,850,000. Cold Metal has about 20 licensees.

• The Dept. of Justice action seeking patent cancellation was based on the contention that Steckel deceived the Patent Office through an agreement with rival claimants. The patents, granted in 1930, relate to rolling machinery with antifriction bearings, and methods of applying power by tension on the delivered strip of metal, rather than on the rolls.



*This Signal Corps photo shows a GMC truck by-passing a blown-out bridge and blasted anti-aircraft gun.*

## 575,000 Trucks That Can "Take It" ... ALL GMCS

You could scarcely call this battle-scarred route a road, but the GMC Army truck with its powerful "270" engine driving through all six wheels takes it in stride. A GMC is powered for punishment . . . built to work under the most adverse conditions where bombs have blasted roads and bridges . . . where rains have made a sea of mud . . . where extreme temperatures make it "tough going" for any vehicle. A GMC can "take it" under fire, too. During a recent invasion, an exploding enemy shell damaged chassis and body of a GMC. But despite the damage, it carried load after load of supplies before a maintenance crew had time to make repairs. In every theater of war, this fighting reputation is being multiplied a thousandfold. For the "six-by-six" and other GMC trucks and "Ducks" delivered to the Armed Forces number over 575,000.

INVEST IN VICTORY... BUY MORE WAR BONDS



In addition to being one of the largest producers of military vehicles, GMC builds many commercial trucks for essential users. Civilian GMCS are powered by engines of the same basic design as the famous "270," used in the GMC "six-by-six" truck . . . the "Workhorse of the Army."



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# Rising Papers

PRINTING AND TECHNICAL

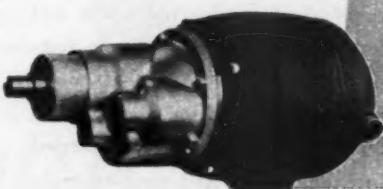
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SPECIAL APPLICATION FRACTIONAL HORSEPOWER MOTORS

started in 1942, began sending ewe breeding stock to jammed slaughterhouses. A short time ago, growers met with Fred M. Vinson, then Director of War Mobilization, asked him to put subsidy on lambs, and demanded that he restrain Secretary of the Interior Harold Ickes' Grazing Service from boosting public domain grazing fees.

Washington responded to the pressure for subsidies direct to growers and lambs, replacing the 95¢ per cwt. formerly paid to slaughterers for all sheep and lambs slaughtered in authorized plants.

• Premium on Heavy Lambs—Although grower representatives in and out of Congress demanded as high as \$2.50 per cwt. flat rate, the result was payments ranging from \$1.50 to \$2.50 per cwt. for lambs weighing from 65 to 90 lb.; from \$2.15 to \$3.15 per cwt. for lambs weighing over 90 lb.; and \$1.50 per cwt. for all other sheep and lambs. These variable payments, designed to encourage heavier lambs, went into effect Aug. 5. Payments will be made by the producers by Commodity Agricultural Corp. through local committees of the Agricultural Adjustment Administration.

While officials say that the subsidy along with the CCC wool purchase program, is aimed at increasing the size of flocks, experienced ranchmen and breeders point out that this isn't immediately possible. It takes time to select and breed new stock after the tremendous flow into market this spring, and sheepmen aren't sure that the government will continue subsidizing them. The war has put the industry in a bearish mood.

• Worries Multiply—Sheepmen find more worries coming from government sources than ever before. Secretary Ickes has been forced to withdraw, but not to give up, the grazing fee raise. The United States Forest Service is making its decennial review of the allotment of grazing lands, which is unsettling to big ranchers.

The Agriculture Dept. can do nothing about a bad labor situation, nor, apparently, can anyone else.

The Interstate Commerce Commission has reversed itself and is going to hold hearings looking to lowering allegedly discriminatory wool freight rates but not until next January.

Sheepmen have failed to block WPA order M-388—forcing textile production into low-cost goods—and to persuade Congress to modify the reciprocal trade bill in favor of a strict wool import quota.

• Stockpiles Decline—More cheering is the prospect that domestic woolens and worsted mills, although military production is commencing to ease off, will need considerable quantities of domestic

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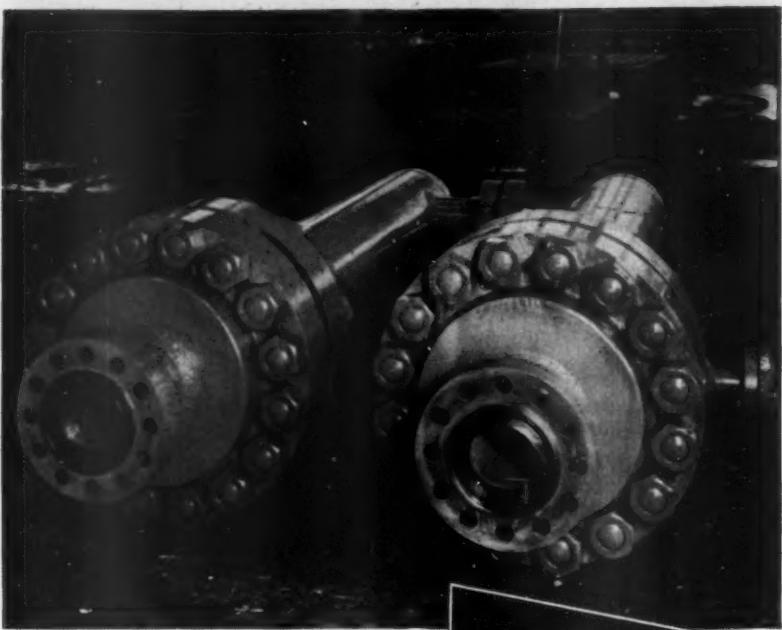
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wool for civilian goods even though heavily underpriced by foreign wool. And growers are rubbing their eyes to find that the foreign wool stockpile is practically all gone—sold overseas or for war production. The domestic stockpile is down to around 290,000,000 lb.

The new lamb subsidy undoubtedly will help stabilize sheep numbers above their present low level of 41,000,000.

#### CEMETERY CHAIN OPPOSED

Advocates of a proposal for an elaborate chain of government-owned national cemeteries for the interment of veterans of all wars have taken the social security slogan "from the cradle to the grave" far too seriously, according to William P. Maloney, spokesman for the American Cemetery Owner Assn. The proposed burial places would be in addition to the 92 existing national cemeteries.

A far more logical plan, Maloney argues, would be to provide a modest allowance to the family of a veteran at the time of death for purchase of burial space in a cemetery of their own choosing. Thus, any expenditures would be spread over many years, and the taxpayers would be relieved of an ultimate outlay in excess of \$1,000,000,000 of which, the association estimates, \$100,000,000 would be spent in the first year of the proposed program.

But more important, Maloney says, veterans have in the past, because of deeply rooted customs and traditions of the American people, shown a preference for burial with the family group in the family plot of their choice. As a result, only 3% (462,649) of all deceased veterans of all U. S. wars are buried in national cemeteries. Of these, 149,762 are unknown dead.

Existing national cemeteries, Maloney contends, have room for 687,351 additional interments, enough to provide sufficient burial space through the life span of veterans of this war, with more than 200,000 plots for any emergencies that may arise.

#### POTTED PLANTS BY AIR?

Potted plants in bloom, as well as nursery stock, may be flown from California to eastern markets after the war.

California has a long growing season, and eastern shops have long wanted western products. Air express for California cut flowers now is commonplace, but nursery plants needed lower rates, and different methods of packing and handling. Now, with the airlines seeking greater volume in air-borne cargo, the California Nurserymen's Assn. has a committee working with airlines on shipment details.

# PRODUCTION

## Radar: Useful Peacetime Tool

Government's disclosure of wartime adaptations of military services' "Seeing Eye" indicates vital role for famed radio direction and range finder in air and at sea, limited job elsewhere.

To a nation already awed by word of the atomic bomb, Washington this week released the first comprehensive report on another spectacular technological development of the war—radar.

- **Applications Limited**—Ever since the first abortive publicity about radar (BW Jun. 5 '43, p 36), which the government first approved and then stepped on, there has been much starry-eyed speculation about its peacetime applications.

Radar does have certain definite possibilities for business and industry, but they are limited. These may be realized rapidly; but not by any stretch of the imagination can radar hold the long-range industrial potentialities inherent in atomic energy.

- **Replaces Sense of Sight**—In its simplest explanation, radar replaces the sense of sight—piercing fog, smoke, cloud, or darkness, and "seeing" far beyond the limits of human vision.

Its major peacetime applications, then, will be in the field of air and water transportation, making naviga-

tion entirely continuous and safe from the threat of collision, regardless of night and weather. It is expected to have particular utility in regulating air traffic over congested airways and near airports. Civil Aeronautics Administration obtained ten carloads of equipment from the services several months ago to begin experimental work.

But its biggest influence will be indirect. Technological improvements which made radar possible can be applied to other fields of electronics: commercial radio, television, telephone, hearing aids, industrial electronics.

- **Gigantic New Industry**—A tremendous industry has been built up.

Radar equipment deliveries to the Army and Navy up to July 1, 1945, totaled \$2,700,000,000, divided \$1,000,000,000 for air-borne equipment; \$800,000,000 for ground equipment; \$500,000,000 for shipborne equipment; and \$400,000,000 for miscellaneous. Development costs, included in these totals, are believed to run under \$10,-

000,000, of which the largest single item was between \$10,000,000 and \$20,000,000 per year for the Massachusetts Institute of Technology's Radiation Laboratory at Cambridge, Mass.

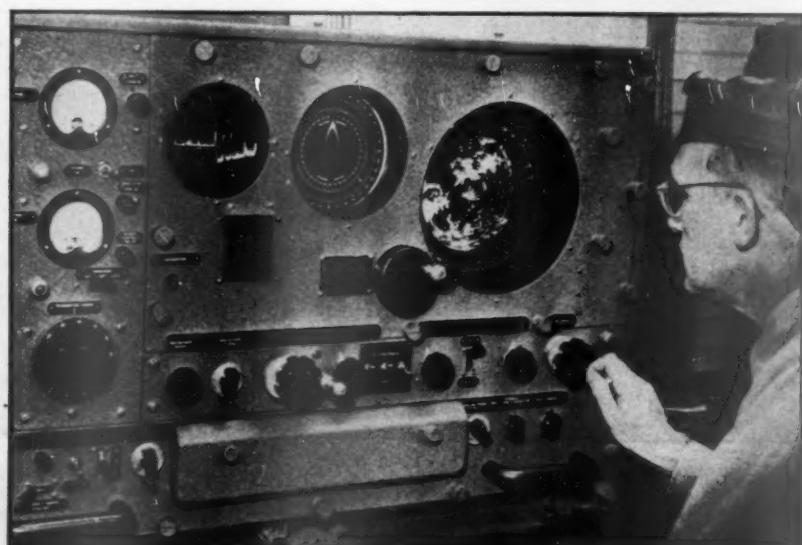
A colossal number of men have been trained in radar operation and maintenance; their knowledge will speed peacetime application of electronics in new fields, expand it in established fields.

- **How Radar Works**—Documenting radar's accomplishments in air, sea, and land warfare, the joint report issued by the Army, Navy, and Office of Scientific Research & Development explains that radar (the word comes from the descriptive phrase "radio detecting and ranging") is based, technically, on the fact that radio waves are reflected by the objects they strike.

By sending out radio waves at intervals of a few thousandths of a second in very intense bursts of perhaps only a millionth of a second duration, then



Obliterated from all photographs until this week, the directional "bed spring" antenna (right) has been long an appendage atop fighting ships. Radio impulses, transmitted then caught on the rebound, are recorded on "scopes" (below, right) of several ship radar sets, the data plotted into information.



measuring the time required for the radio "echo" to return, it is possible to measure the distance from transmitter to object (the waves travel in a straight line at the speed of light). One of the most amazing developments in radar has been that man has learned to measure this elapsed time with an accuracy of one-thirtieth of a millionth of a second on a range of only five or ten yards. Directional antennas are used to beam the waves along a narrow path; thus both direction and distance are obtained.

• **Signals Reflected**—Metal objects, such as aircraft and ships, are particularly good reflectors, whereas their backgrounds of sky or sea are comparatively poor. Briefly, what occurs is this: The radio wave sent from the radar transmitter encounters an airplane, for example, and causes a high frequency alternating current to flow in the aluminum of the fuselage and wings. This current has the same properties as the current in the aerial of the radar transmitter. By virtue of these "induced" currents, the airplane becomes in itself a transmitter, radiating ("reflecting") waves in all directions. The induced current is very small, so the reradiated waves are weak. But with a sensitive receiver, located at the radar, they may be detected tens, or hundreds, of miles away.

• **Finds Bombing Targets**—All solid objects reflect radio waves to some degree, hence may be detected if they can be distinguished from the background.

In the case of a manufacturing plant, it may be difficult to distinguish it from other buildings or the ground around it, but even in such cases, radar has been successful in finding bombing targets.

Distinction between land and water

is comparatively simple. Coastlines or, for example, rivers running through cities, can be detected and matched with charts for navigation and bombing.

• **Versatile Weapon**—Radar has been applied to virtually every branch of warfare, and much of the Army-Navy-OSRD report is taken up with these strategic and tactical applications. Among the main applications are defense against enemy aircraft and weapons such as the German rocket bombs; detection and tracking of enemy naval vessels, shipping and submarines; detection of strategic bombing targets when hidden by overcast; control of supporting aircraft over ground troops; control of naval gunfire; and navigation of aircraft and ships.

• **Study Began in 1922**—Also revealed are the organizations, here and in England, which originated and carried forward the radar work.

The first suggestion that reflected radio waves could be used for detection of enemy activity was advanced by A. Hoyt Taylor, a physicist at the U. S. Naval Research Laboratory, in 1922. The basic principles of reflected waves had, however, been stated by the discoverer of radio, Heinrich Hertz, in 1886.

Active work on military radar began simultaneously and independently in this country, England, France, and Germany around 1935.

• **On Job at Pearl Harbor**—The first U. S. Army radar, designed to detect airplanes and train searchlights on them, was demonstrated in 1937 and went into commercial production in 1940. Another Army radar, for warning of distant aircraft, was at work at Pearl Harbor on Dec. 7, 1941, and detected

the approaching Japs at a range of 132 miles. This incident had been reported shortly after the attack, but the detecting device was not identified as radar.

The first U. S. Navy shipboard radar was tested in 1937 aboard the destroyer Leary.

• **Small Sets for Planes**—Meanwhile, Britain had attacked the problem of designing a radar small enough to be carried in an aircraft. In August, 1940, a British delegation visited the U. S. and turned over the details of this development to the U. S. Army and Navy, as well as to a civilian group which later formed the Radiation Laboratory at M.I.T.

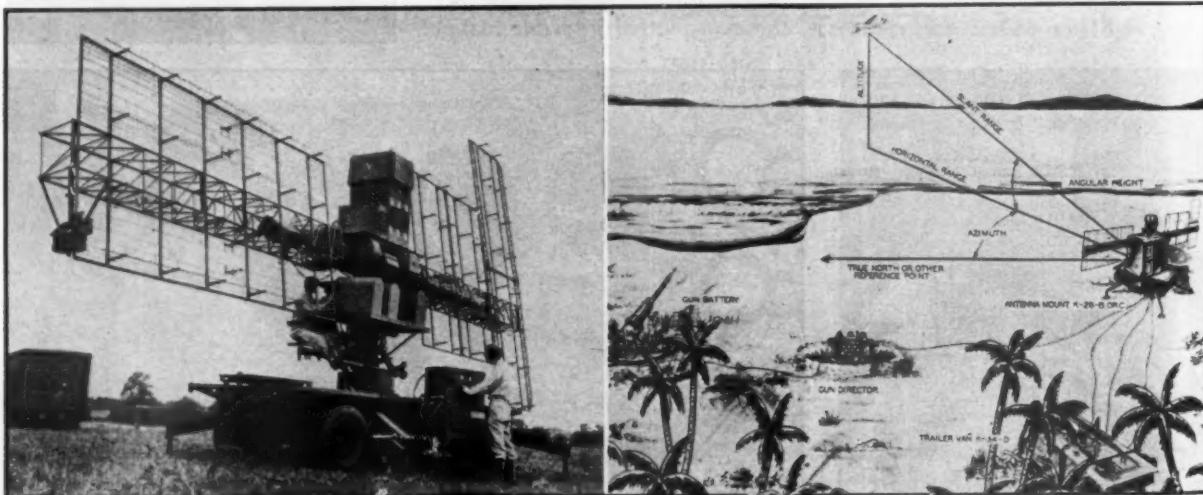
This laboratory, now a group of 4,000 workers, was assigned the task of carrying forward aircraft radar, using wavelengths (microwaves) much shorter than had been used previously. Since then, Allied radar design has been almost entirely a joint British-American effort.

• **Mickey, the Bombardier**—One of the outstanding results is "Mickey," an airborne microwave radar for detecting bombing targets through the overcast.

Another is a ground-based gunfire-control radar which can track an aircraft through the sky, and keep associated antiaircraft batteries trained on it. This combination was outstandingly successful in shooting down the German V-1 bombs in the latter stages of the German V-weapon offensive.

• **Aided Air Defense**—In air defense (radar employed to frustrate enemy bomber attacks), a high degree of coordination between aircraft and radar was required.

During the Battle of Britain, the coastal radar warning stations would detect the German aircraft groups forming



Another application of radar is the directional gunfire control unit (left), whose instruments swiftly locate aircraft, accurately plot their course. Combined with electronic gun directors (right), the unit ran up an astounding score of hits on enemy planes, is credited with knocking out most of the V-bombs fired on England.



## *What kind of monument to the Unknown Soldier's son?*

Here stands one of the most hallowed monuments in the world... and one of the most tragic.

For this American soldier died that the world might be safe for his son.

And his son was killed.

We propose a different kind of monument to this second generation unknown.

America now is more powerful than all the rest of the world.

More powerful in thought... A single American magazine today, printed in 11 languages, outsells any other publication in 53 countries of the world. People are eager for American ideas.

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More powerful in wealth... Over half the earth's total capacity to produce is here in our plants, machinery and skills. People need the things that America can produce.

This stupendous power can break down the barriers of ignorance, intolerance and want. It can keep our nation strong. It can enforce decency and peace upon the world. Ours is the chance and the responsibility to set an example for all the peoples of the earth to see.

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ing over airfields in France and follow them across the Channel. This information was transmitted to fighter control centers and plotted on large maps. As the intended target area became clear, British fighter aircraft were alerted and sent to meet the bombers.

The fighters were directed to the bombers by a system known as Ground Control of Interception (GCI), in which the ground radar operators observed both fighters and enemy bombers on the same radar screen. The fighters were directed by ground control until they made visual contact, whereupon the pilots took over for the kill.

• **Thwarted Night Raiders**—Later, this system was supplemented by Airborne Interception (AI), in which fighter-bombers carried radar. GCI coached these fighter-bombers to within one to three miles of enemy bombers, then the plane radar took over to lead the ships directly to the enemy. AI thus provided effective defense against night bombings. This defense was so successful that the German Bomber Command eventually called off the bomber offensive, although they possessed vast superiority, numerically, over the decimated British fighter force.

• **Eyes for Bombers**—Navigation, by detection of coastlines, rivers, and large cities, was also carried out in air-borne radar, although special navigation devices were developed for this purpose.

A long-range navigational device, widely used by British and American pilots and by naval surface craft, is the Loran system developed by the Radiation Laboratory. This system gives precise position fixes to navigators, as far as 1,500 miles from stations which supply electronic lines of position to replace the latitude and longitude of conventional navigation.

This system, related to radar indirectly but operated on ordinary short-waves, has now been extended to cover most of the oceans of the world.

• **And for Warships**—Aboard ship, radar is coordinated in the Combat Information Center (CIC), a room below decks set aside for the reception of radar echoes from all the radars aboard. (As many as seven different types of radar are carried.) Here the tracks of nearby aircraft are plotted relative to the course of the ship, and instructions given, in a manner similar to the GCI of short operations, to intercept approaching enemy bombers or torpedo planes.

In the CIC, also, bearing and range to enemy units are read into the computers which train the guns. More than one Jap ship was sunk in complete darkness by this technique.

• **Identifies Friend or Foe**—The problem of distinguishing between friendly and hostile aircraft and ships poses



Radar's importance as a sky navigational aid is illustrated graphically by a map (top) of the Mediterranean coastline made from photographs of a radar scope which unerringly picked out landmarks, and a conventional map (below) of the same area.

itself as the radar echo carries no clue to the identity of the reflecting object.

Special equipment called IFF (identification friend or foe) is carried by all air and surface units to indicate to the searching radar that the echo is friendly. Failing the appearance of the identification code, the target is presumed to be hostile. How IFF operates remains a military secret.

• **Countermeasures**—Radar has not been a monopoly of the Allied forces, although German radar generally lagged behind American and British designs, and Japanese radar much more so. Despite the inequality there has been a consistent radar war, each side developing countermeasures to outwit opposing radar.

An outstanding example of this radar battle occurred in the warfare against the German U-boats. Early air-borne radar, operating with long waves, was used to detect surfaced submarines recharging batteries. Initially, this method

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1076

## They Needed a Special Kind of Hose

**Thermoid**  
Solved the Problem.



The General Detroit Corporation, manufacturers of fire extinguishers, asked Thermoid to produce  $\frac{5}{16}$ " wire braid hose, duplicating or improving upon the hose they were then using. Thermoid turned the problem over to its engineering and research staff and they came up with the solution. They engineered a special hose. The tube particularly was designed to handle CO<sub>2</sub> under pressure, with the added feature of being made resistant to the permeating effect of CO<sub>2</sub>.

Speaking of this problem, E. A. Warren, Vice-President of The General Detroit Corp., says: "It is simply a grand job of cooperation between Thermoid Company and The General Detroit Corporation, another case where cooperation can make a fine record of necessary goods turned out for the Army and Navy."

This problem is one of the many which Thermoid engineers are solving to improve the quality of the products of American industry. If you have a problem concerning the use, design or manufacture of industrial rubber, why not call in the Thermoid field representative.

### Radar Patent Snarl Ahead

Ever since August, 1940, the British have turned over to the U. S. all data on their radar developments, with the understanding that no publication of unpatented inventions would be permitted until a satisfactory joint agreement on their status could be reached. Otherwise, such publication would prejudice the rights of British inventors, under the British patent law (BW-Feb. 10'45,p5). Most important British invention was the cavity magnetron, the basic transmitting tube of microwave radar sets.

• Observers see the makings of a complicated postwar patent snarl in this country. Patents have not been formally pooled, exchange being effected through an informal arrangement. Involved are privately developed inventions, inventions on which the government owns the patents, and those developed under government contract. • Virtually every manufacturer in the radio and electronics field contributed to radar in some degree. Among the biggest producers of complete radar sets were: Western Electric, General Electric, and Philco. Other substantial producers were RCA, Crosley, Zenith, Raytheon, Stromberg-Carlson, Sylvania, Westinghouse, Federal (I. T. & T.), Bendix, Galvin, Sparks-Wutherford, Delco, Farnsworth, Emerson, Belmont, Admiral. Hundreds of other firms supplied parts, subassemblies, miscellaneous items.

of search proved highly effective, but the Germans captured radar equipment and soon found that they could fit each submarine with a receiver, capable of picking up the Allied radar transmissions before the radar could, in turn, reveal the submarine.

When the radar was thus intercepted, the U-boat dived before the aircraft could detect its presence. Sightings fell off and the U-boat offensive reached its 1942 peak.

• The Schnorkel Emerges—Then the Allies played a trump card—an air-borne radar operating on a new, and much shorter, wavelength. This outwitted the Germans up to the end of the European war, in part because the necessary receiver for the new wavelength was harder to build, but largely on account of faulty German military intelligence.

Finally the Germans gave up trying to detect the approaching radars; in



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## How to be sure of getting your

# MONEY'S WORTH

Right now there are some bargains in machine tools on the market. And there are some low-priced used machines for sale that are distinctly not bargains.

To be a good buy, anything you purchase should be worth more to you than the money you pay for it.

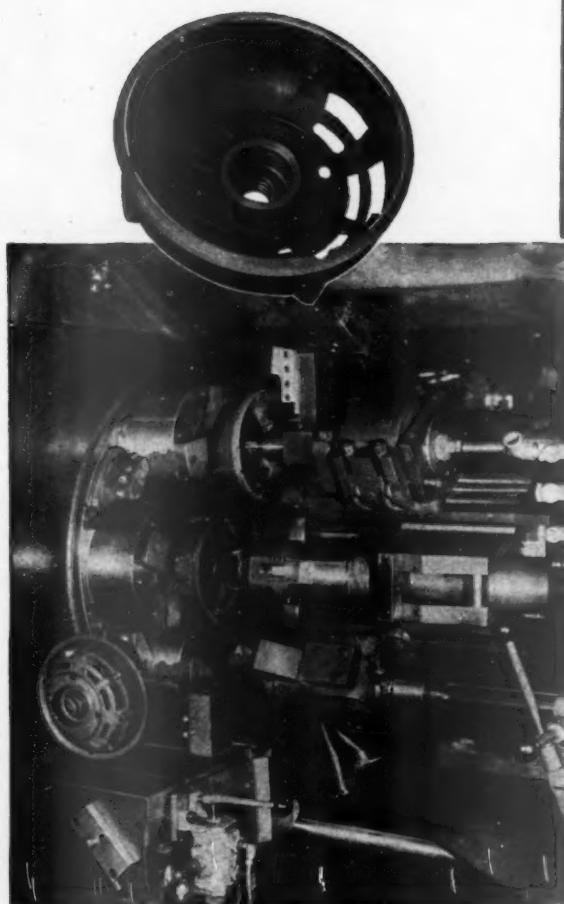
So far as used Acme-Gridley Bar Automatics are concerned, we suggest that you buy only on the basis of positive information as to the present condition of the machine and its adaptability to your production, regardless of age or model.

If the cost of the used Acme-Gridley, plus reconditioning and retooling costs, totals less than the cost of the same model new, chances are it is a good investment.

But be sure that a new model, even at higher cost, would not be a still better investment, because of its greater production ability.

We have a "cradle to grave" interest in all Acme-Gridleys—an interest in seeing that, old or new, they are profitable producers for their owners.

So we want you to feel free to call upon our experience in making your decision.



Sample of Low-Cost Production on a new Acme-Gridley 12" 6-spindle chucking machine. On this cast iron motor bracket, 10½" diameter, the 14 operations needed to finish the part were done with carbide-tipped tools in less than one minute machine time.

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## FACT OR FICTION? A QUICK QUIZ ON DULUTH-SUPERIOR



**4 SNEEZES HELPED DEVELOP ONE LEADING TWIN PORTS INDUSTRY. FACT OR FICTION?**

### CHECK YOUR ANSWERS HERE:

1. Fact. After Pearl Harbor, the Army secretly installed troops, air bases and bristling defense works to protect Lake Superior shipping . . . but no enemy attack was ever made. At stake was 85% of all iron ore going to U. S. steel mills, shipped from the Lake Superior region—much of it from Duluth and Superior. Northern Pacific, which hauls ore to dockside from the Cuyuna Range, salutes the Army and the Twin Ports for a great victory, well earned.

2. Fact. This "reservoir" is *Lake Superior*, world's largest body of fresh water. Water from the lake—miraculously clean, soft, and ice-cold—is drawn directly into city mains through intake pipes running a quarter-mile out from shore.

3. Fiction. The Mackinaw, most powerful ice breaker afloat, serves more important needs. Launched last December, it immediately freed four seagoing freighters, built in booming shipyards of the Twin Ports, for ocean service. By ramming passages in winter ice, the Mackinaw will add weeks to the lake shipping season . . . bring extra cargoes of ore, coal, grain, flour, gasoline and other products to and from the Twin Ports . . . and thus add still more traffic at America's second busiest harbor.

4. Fact. Clean, pollen-free air in this region, which gives hay-fever sufferers blessed relief, has helped make tourist business a major industry, ranking with such others as steel and wire products, fishing, refrigerators, and marine engines. After victory, Northern Pacific trains will again carry thousands to this lovely, "sneeze-proof" vacationland.



**NORTHERN PACIFIC**

*Main Street of the Northwest*

fact, gave up recharging batteries on the surface altogether. Instead the Germans introduced the Schnorkel, a breathing tube through which air was conducted to the submerged engines. This forced the Allies to develop new methods which were barely introduced when the Germans capitulated.

## 2-Deck Assembly

Ford's Chester (Pa.) plant unveils its new production line as it claims first civilian output on wholly reconverted basis.

Although the first 1946 model Ford rolled from the River Rouge (Dearborn) production line a month ago (BW-Jul 14 '45, p21), Ford's Chester, Pa. (Philadelphia), works this week claimed the distinction of being the first plant to turn out civilian vehicles on a wholly reconverted basis. River Rouge's production, as well as Monday's resumption of civilian output at Ford's Edgewater, N. J. (New York City), plant, was on military assembly lines, officials of the Chester plant said.

• Double Decker—Production of civilian trucks in the Chester plant, which was resumed Monday, disclosed that something new has been added to assembly line techniques.

The line now has two instead of one moving platform, one above the other. The upper platform conveys the vehicles as they are being assembled. The lower, carrying mechanics, permits them to work at full standing height on operations necessary underneath the car. Employees working on it must be between 5 ft. 8 in. and 6 ft. tall.

• Innovations—In addition, innovations picked up along the road of war production have been added to the new trucks. One, of which Ford is particularly proud, is a new trimetal (silver, copper, and lead) floating bearing. Tests are said to have indicated that the addition of silver gives longer life to the bearings.

Other changes in specifications include oil bath air cleaners and oil filters; crankcase ventilation to reduce oil consumption and prevent sludge; a higher lift cam to improve engine efficiency; aluminum pistons; shot-blasted and rust-proofed valve springs; improved transmission and differentials and a pressure cap radiator to increase engine cooling.

• Half Reconverted—Since February 1942, the Chester plant has serviced, equipped, and shipped more than 140,000 armored vehicles to the services.

Only six weeks ago that section of

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### If you live in an apartment . . .

You will welcome the announcement by Minneapolis-Honeywell of the development of Personalized Heating Control, which brings Moduflow to apartment buildings.

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Be sure, for your own health and comfort, to demand M-H Personalized Heating Control in the apartment you lease after the war. We suggest you bring this advertisement to the attention of your apartment manager or owner.

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You will find that the installation of M-H Personalized Heating Control will greatly increase rentability and provide real tenant satisfaction. This amazing new development can be installed for a fractional percentage of the over-all cost in any building, *large or small*, during construction or modernization. Forward looking builders and architects with plans on the drawing board, are making provision for M-H Personalized Control. Those planning to build an apartment, architects and engineers — send for full information and engineering data, to Minneapolis-Honeywell Regulator Company, 2728 Fourth Avenue South, Minneapolis 8, Minnesota.

\* Moduflow is the new and revolutionary heating control system for homes, developed by Honeywell engineers. Moduflow means . . . Modulated heat, with continuous flow of the heat medium (air, water, steam).



A few years ago Mechanical Refrigeration in apartments was unheard of. Now it is essential. M-H Personalized Control will be just as essential in the post-war apartment building. The time to give full consideration to Personalized Apartment Heating is when your new building is in the plan stage.

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**GENERAL Engineered Shipping Containers** are designed to the product. Frequently the product and the container come off the production line together—as a unit.

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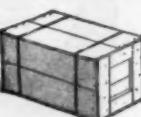
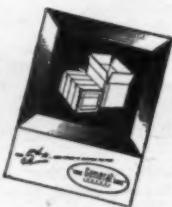
Let us show you how **GENERAL Engineered Shipping Containers** cut costs, speed production, save space, and conserve man-hours! It's the big story, the profit story, behind our "Part of the Product" Plan.



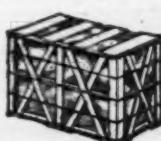
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Houston, Dallas.

the 561,000-sq. ft. plant, now housing the truck assembly lines, was crowded with Pershing and Sherman tanks. Since then half of the plant has been reconverted, all the work being done by Ford employees without outside aid. Ford officials regard this conversion job as one of the fastest ever accomplished in a plant of this size.

The Chester plant is scheduled to turn out 450 trucks and automobiles a day as soon as operations get into full swing. Added to these will be an equal number completed in knockdown form for overseas shipment.

### Bell's Peace Plans

A far-flung program of telephone expansion will start with present waiting list and extend to many new services.

First job in the Bell System's two-billion-dollar postwar construction program will be to provide telephone service to the 2,014,000 applicants now on the waiting lists, says Mark R. Sullivan, vice-president of American Telephone & Telegraph Co.

• **And Then—** Thereafter, Bell will:

(1) Catch up on plant shortages to restore prewar speed of service.

(2) Replace 800,000 antiquated telephone sets and other equipment.

(3) Improve equipment on customers' premises (e.g. dial PBX's for manual).

(4) Strengthen the long distance network by laying 10,000 miles of coaxial cable (BW-Jun.17'44,p90), and making a test installation of radio relay.

(5) Extend and improve rural phone service.

(6) Replace more manual with dial equipment in local service.

(7) Equip toll circuits so operators may dial many long distance calls.

(8) Make possible subscriber dialing of short haul toll calls.

(9) Extend service to motor vehicles (BW-Jul.7'45,p63) and expand overseas radiophone facilities.

(10) Provide for future growth—a \$300,000,000 annual item.

• **With Respect to Capital**—In a left-handed plea against rate reduction, Sullivan points out the Bell System "must obtain additional capital [for such work] in competition with everyone else who is in the market for it," and "a controlling factor in the investor's judgment is what return will be available to him."

A billion dollars will be spent almost immediately after the war, with the peak year hitting possibly \$650,000,000—50% above the best prewar year.

## Cooler Trolleys

New type air-conditioned electric coach will get tryout in Atlanta. Experimenters use mechanical refrigeration.

City transportation officials are displaying keen interest in a new type electric trolley coach scheduled to be placed in service in Atlanta, Ga., within the next fortnight. The new vehicle, built by Pullman-Standard, will have complete air-conditioning equipment. This is the first time such equipment has been installed on a transportation vehicle in city service.

• Two Top Problems—Desirability of complete air conditioning of city transit vehicles has long been recognized, but technical difficulties have intervened, chief among them being the weight and cost of equipment required.

Winter air conditioning is not a problem of serious magnitude, because heat is readily available—from the power lines in the case of electric rail cars and trolley coaches, and from the engine in the case of motor buses.

But mechanical refrigeration for summer air conditioning is more difficult. Summer air-conditioning equipment has been installed in some 3,500 intercity buses, but engineers estimate that vehi-

### Plastic Body for Stout Car

Detroit is constantly buzzing with rumors of new cars to be introduced by this, that, or the other producer.

Latest report exciting the interest of the industry is that Graham-Paige will put a radically new vehicle, embracing advanced ideas of designer William B. Stout, on the market some time next year.

The Stout car, it is said, will have a plastic body reinforced with Fiberglas, a small high-compression engine at the rear, baggage compartment at the front, and will sell for around \$1,000 f.o.b. Detroit.

Graham-Paige is reported to have purchased six of the plastic bodies and to be pushing trials of the new car day and night to determine its roadability and mechanical stability. Company officials refuse to say anything about their new Stout auto, save that it will incorporate many of Stout's oft-expressed ideas on car design.



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The picture-and-caption book entitled: "Take It To Taft-Peirce" will take you, in 20 minutes, through the Taft-Peirce Contract Manufacturing Division. It will show you the men and machines ready to work with you in tooling or production in small lots or quantity—ready to produce for you anything from a single part or tool to complete mechanisms or products in mass lots. All you have to do to make your reservation for this trip is to write for this book now, to The Taft-Peirce Mfg. Co., Woonsocket, R. I.

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# Westinghouse

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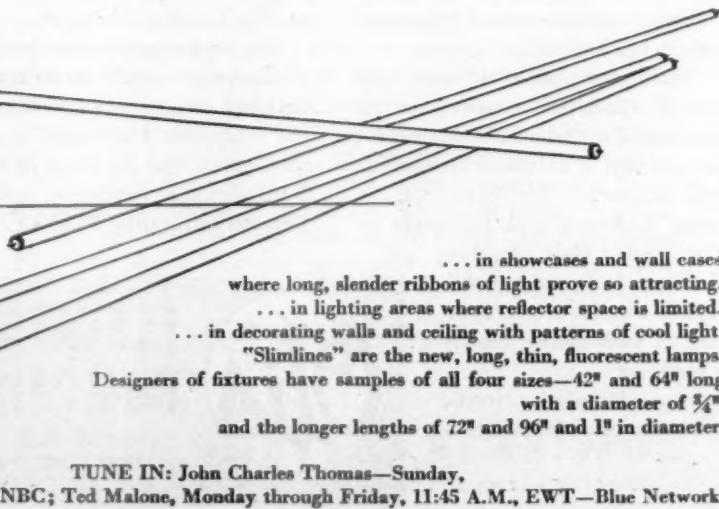
This is a "Self-Service" market, yet one salesman is  
at work all day long. Silently, unobtrusively, the soft, clear  
See-ability created by Westinghouse Lamps  
welcomes the customer as she enters the door . . .  
catches her eye and says  
"Here is what you want. Come and get it!"

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In a store like this . . . with its many attractive displays,  
the eye-easy illumination of Westinghouse Lamps  
wins warm customer approval! To store  
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that pays out in prestige *and* profits! Let your  
Westinghouse dealer give you the real facts on modern  
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## SLIMLINES" BECKON, TOO



. . . in showcases and wall cases  
where long, slender ribbons of light prove so attracting.  
. . . in lighting areas where reflector space is limited.  
. . . in decorating walls and ceiling with patterns of cool light.  
"Slimlines" are the new, long, thin, fluorescent lamps.  
Designers of fixtures have samples of all four sizes—42" and 64" long  
with a diameter of  $\frac{3}{4}$ ".  
and the longer lengths of 72" and 96" and 1" in diameter.

TUNE IN: John Charles Thomas—Sunday,  
2:30 P.M., EWT—NBC; Ted Malone, Monday through Friday, 11:45 A.M., EWT—Blue Network.



### **the machine that helped make skylines**



**...now serves  
small  
buildings,  
too**

The gearless elevator machine, first designed by Otis Elevator Company, was the result of a demand for faster and more efficient vertical transportation in tall buildings.

During the past 43 years, the smooth, quiet performance, and the economical operation of this machine have earned it universal recognition and acceptance. For these reasons, many Architects and Engineers today specify Otis Gearless Elevators for smaller buildings — whenever performance of outstanding quality is required.

Stores, Hospitals, Hotels, and many other buildings —

whether of a few stories or many — can now benefit by the life-long operating smoothness and efficiency of Otis Gearless Elevators.

Otis representatives are ready now to cooperate with Architects and building owners . . . to recommend the equipment best suited to individual needs. For the finest in vertical transportation tomorrow, call your Otis representative TODAY.



cles in urban service would require about twice the volume of cooled air that is required in intercity buses because of the frequent opening of doors for passengers to get on and off. For that reason they have hesitated to include air cooling in the design of vehicles for use in cities.

• **Experiments to Continue** — How Transit Research Corp., which specializes in design of modern streetcars, is experimenting with evaporation cooling by introducing large volume of outdoor air into the vehicle interior by means of powerful fans.

The Atlanta trolley coach experiment employs mechanical refrigeration for cooling. Ample power to operate refrigerating equipment is available from the overhead electric power lines from which the vehicle obtains current for operation. This excess power permits high-speed operation despite the weight of equipment.

• **Coach Service Expands** — Particular significance attaches to the Atlanta experiment because, according to statistics, electric trolley coach service is the most popular and fastest growing form of city transportation. Last year more than a billion passengers were carried in trolley coaches in this country to set an all-time record.

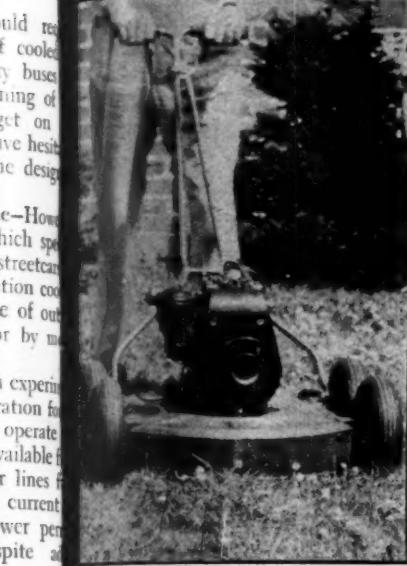
Important extensions of trolley coach service are under consideration in Chicago, Detroit, Cleveland, Cincinnati, Boston, San Francisco, Albany, Providence, Indianapolis, Des Moines, Milwaukee, Memphis, and elsewhere. In some instances, coaches will replace streetcars, and in others they will replace motor buses. Development of a practical system of air conditioning for trolley coaches would have a far-reaching effect on the comfort of travel.

### **DEVICE IMPROVES EGGS**

Still experimental, and possibly need of a radio waveband for operation, is a high-frequency machine for sterilizing eggs, under development at the University of California Farm, at Davis, Calif.

In principle, somewhere between radio and diathermy, the device generates oscillations that cook an egg hard in about nine minutes, but with only a ten-second exposure, the egg remains killed, giving better keeping qualities. Certain bacteria on the shell are also destroyed; the egg's albumen is slightly stiffened, so that when broken in a pan, the yolk stands out above it.

If brought to a commercial stage, the machine probably would improve the keeping quality, and appearance of eggs, fit in with oil preservation. Experts are not ready to make claims.



### AS IT SPINS

sembling an industrial floor scrubber, the newest offering of Milwaukee's Whirlwind Lawn Mower Corp. is a grass cutter which applies power speed to the age-old principle of sickle. Mounted on rubber wheels, the unit consists of a 1½-hp. gasoline engine which spins a double-bladed arm at 3,000 r.p.m. The whirl-action, the company says, creates suction which draws up down-trod grass to be cut and then sprays clippings as mulch. The novel construction permits trimming close walks, even under bushes.

### OD PLANT USES DDT

DDT, the wartime insecticide, has proved its effectiveness, this time in application in a food products manufacturing plant at Vincentown, N.J., at a cost of \$5.25 per pound. Two pounds of DDT, in 2½ gal. of insect oil solution, were sprayed on the walls of a tomato products factory. The result is an almost flyless plant at a cost slightly less than \$5. The fact that the plant is large enough to turn out a half million cases of tomato juice a year gives importance to the test. Francis C. Stokes, who was present at the gathering, said that every establishment could safely and easily use the new chemical. Use of DDT, he said, probably will be a common practice in all food plants by next season.



## *Rollers Roll -* **AND HIGHWAYS FLOW WITH AMERICA'S GOODS**

Food—furniture—fuel—clothing—castings—baby carriages... the list could go on and on, almost as endlessly as do the streams of those American products carried over our highways and byways in great cargo trucks.

To make inter-city truck fleet operation a profitable business the vehicles must be in regular service most of the 24 hours in a day. They need to have tremendous stamina and every part must function with minimum friction. So, in the fields of truck manufacture, high-precision Hyatt Roller Bearings are respected for their contributions to mechanical efficiency, long life and reduced operating and maintenance costs.

Not only in trucks and all other forms of commercial transportation, but throughout industry, agriculture, our weapons of war, millions of rollers roll in the Hyatt Roller Bearings that keep shafts aligned, gears and wheels turning. Hyatt Bearings Division, General Motors Corporation, Harrison, N.J.

*Finish the Fight—Keep Buying War Bonds*

**HYATT ROLLER BEARINGS**

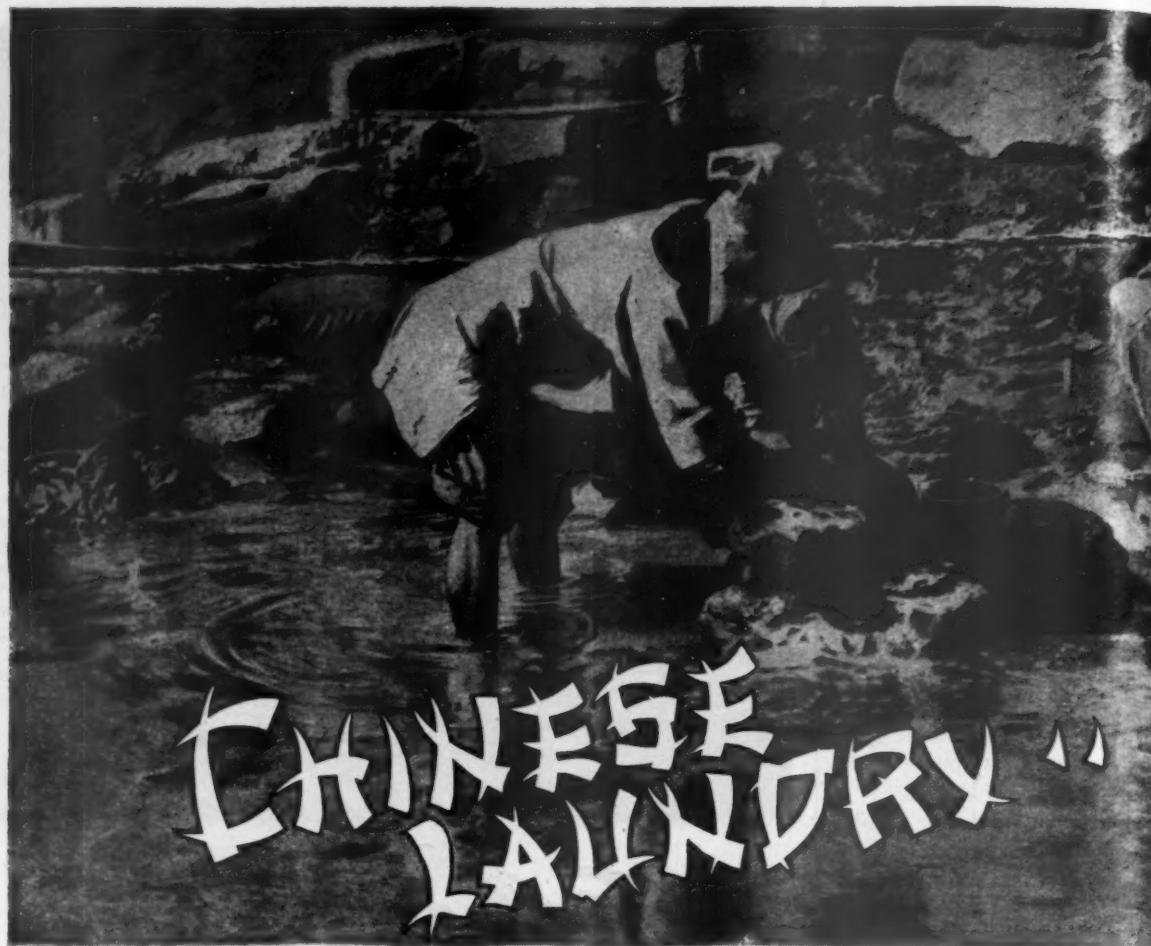


Photo by Frank C. Lempert

# CHINESE LAUNDRY

## STONE AGE or 1945 ?

WRAP this woman in a tigerskin and you might think this a scene from the Stone Age. Actually she is a present-day Chinese peasant, snapped by a recent American visitor, doing her laundry at a polluted river-edge, her washboard a rough stone.

Why does she cling to her ancestors' primitive ways? Wash her clothes in a roily stream, choked with mud, garbage, and filth? YOU know the answer--because her humble home does not have the luxury of running water--neither cold, nor hot--made available because of steel pipe. Cleanliness and sanitation, convenience, comfort and health, all are dependent on the use of more and more

steel pipe. No other metal or material can serve so well at such low cost.

By contrast, the millions of new homes to be built and millions more to be modernized in America depend on it. Decent post-war living calls for unstinted use of steel pipe for home laundries, extra bathrooms, radiant heating--steel pipe of adequate sizes, and hundreds of other steel products--to give our families the best that science and industry can produce. Remember, in your work, that Steel is your ready servant to help you further lift standards of living.



### YOUNGSTOWN

THE YOUNGSTOWN SHEET AND TUBE COMPANY

YOUNGSTOWN, OHIO

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CARBON - ALLOY - AND STAINLESS STEELS  
Pipe and Tubular Products - Sheets - Plates -  
Conduit-Bars-Coke-Tin Plate-Electrolytic Tin  
Plate-Rods-Wire-Nails-Tie Plates and Spikes

## Peace Bullish, Street Holds

**With due allowance for the problems of reconversion, majority sentiment in stock market circles is optimistic, in anticipation of record boom in civilian goods and a period of high dividends.**

Peace is basically bullish. That is the considered opinion of Wall Street, notwithstanding what the immediate impact of victory on American business may

be. That was the stock market's verdict last summer when Normandy was invaded (BW—Jun. 24'44, p15). It was a conclusion, translated into higher market values, that was reached last spring when victory was achieved in Europe (BW—May 5'45, p74). It was still Wall Street's verdict last week, when atomic bomb and Russia's declaration of war on Japan heralded a quick end to hostilities.

**Changed Attitude**—Wall Street didn't always feel that way about it. Two years ago, when Italy was invaded and cracks in the Axis alliance began to show up plainly, the market's preliminary verdict was quite different. In July, 1943, with the overthrow of Mussolini's government, the stock market developed a bad case of "peace blues." Prices tumbled (BW—Nov. 13 '43, p10) and the 1942-45 bull market seriously threatened many times in the five months that followed.

**Pros and Cons**—Since then, however, Wall Streeters have had the time to

check more carefully the pros and cons of the postwar outlook. Of course, not all findings are in agreement. Market circles still contain many who are bearish over the near-term outlook. But most investors and traders, judging from the steady rise of stock prices as total peace has come nearer, appear to feel that the effects of victory on U. S. business as a whole will not be bearish.

Instead, the majority now feels that the many favorable elements in the longer-term outlook far outweigh the potentially dangerous near-term factors.

• **Uneasy Moments**—They have reached this conclusion without ignoring the fact that industry's war-to-peace transition is likely to be accompanied by many uneasy moments that may well have sharp repercussions on stock market values.

Those who believe that the most exciting phase of the 1942-45 bull market still lies ahead bank heavily on the expectation that the civilian goods industry will experience its greatest boom in history, once the task of reconversion has been accomplished.

• **Without Illusions**—The "peace is bullish" group has no illusions about reconversion difficulties (page 15). It is well aware that such troubles may impede

the postwar plans of many companies.

Since as much as 70% of the output of the American industrial machine was recently being devoted to the war effort, either directly or indirectly, it expects reconversion to be a ticklish affair. However, it points out that much war production has been in items equally important to the civilian economy, and that well over half of all industry has no reconversion problems at all.

• **Overemphasis**?—In view of such considerations, the bullish group thinks that difficulties of the transition period have been much overemphasized. And this section of Wall Street opinion very definitely does not agree with the recent Mead Senate War Investigating Committee that "should the war with Japan end at an early date, we will be in a sorry state economically."

Observers of this persuasion say that industry hasn't been caught napping; that many companies have actually been hard at work on their reconversion problems for more than a year; that the government has approved of such action, though it has been kept hush-hush.

• **Deferred Demand**—Once Washington has flashed the green light, these Wall Streeters think, it won't be long before industry as a whole is actually at work on the tremendous backlog of deferred demand for normal peacetime goods. They point to four years of shortages and the reservoir of consumer buying power that has been accumulating since Pearl Harbor days.

The bulls are also counting on the fact that retail and wholesale inventories are at a low point, and that the latter contain a substantial amount of "ersatz" goods that must be junked.

• **Restocking**—Substantial purchases for restocking purposes are thus definitely

## STOCKS—LAST WAR AND THIS ONE





## Your Canadian Sales Can Be Increased

Canadian progress has been so swift, and development so varied, that the potentialities of Canada as a market may not be fully recognized even by those now doing business with that country.

If you are interested in having more specific data regarding the Canadian market we shall be glad to provide up-to-date information.

## THE CANADIAN BANK OF COMMERCE

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Reconversion will revive interest in business costs. Competition will force it. When compensation insurance costs are put on the spot, Employers Mutual welcomes an opportunity to show its record of savings to policyholders. Call an Employers Mutual man.

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LIABILITY INSURANCE  
COMPANY OF WISCONSIN  
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Offices in Principal Cities of the United States  
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foreseen. Such restocking is no small job, either. Automobile dealers, for example, often used to have as many as 500,000 trucks and cars in stock. In many lines, it is estimated, one to two years will be required before normal stocking can be achieved.

After the first World War, the demand for new supplies was actually satisfied in less than two years. The coming replacement boom, however, is expected to last at least three, and perhaps five, years.

This war has been longer, our participation has been much more intensive, and a much greater deferred demand for "necessities" has been built up.

• **A Change in the Economy**—Likewise important is the fact that a larger part of the economy is now bound up in durable goods, so that a revival in production of such goods will, of necessity, have a more stimulating and lasting effect.

Since security values are primarily affected by earnings rather than general corporate production activity, Wall Street's "peace is bullish" adherents have spent considerable time appraising the near-term and longer-term postwar outlook in that direction.

• **Offsetting Factors**—As they now see the situation ahead, the prospective drop in earnings before taxes that is expected in all quarters, bullish or otherwise, during the period of reconversion should be largely, if not entirely, offset by various factors. Of value in this connection, for example, should be the cushioning effect of present excess-profits taxes, the elimination of the former heavy contingency reserves charged against earnings, a reduction in depreciation charges to more normal levels, and the substantial sums that will be available to corporations starting in 1946 under the reconversion tax bill.

Most optimistic, also, are their expectations with respect to dividend payments once things get humming in the postwar years.

• **Wartime Deterrents**—Due to the need for financing war-swollen activity, a desire (since accomplished) to enter the postwar period well-heeled with cash, and a belief that high dividends at a time when war business alone was furnishing most corporate profits would undoubtedly invite public criticism, only about 50% of American business earnings have been finding their way into stockholder pockets in recent years.

With peace prevailing and more normal profit margins possible, these factors would altogether lose their former meaning. Also, corporate taxes are expected to be lowered quickly with war expenditures eliminated. Thus, Wall Street's bullish elements, to a man, look for dividends in the early

postwar years to rise sharply above the recent levels.

• **As One Group Sees It**—One prominent investment advisory group, in fact, thinks as much as 75% of net profits may be paid out to stockholders during the next few years. Moreover, they report that dividends could actually come close to reaching \$8,000,000,000 annually. This is a figure 35% higher than that for the record-breaking dividend year of 1930 and 80% higher than that for 1941, the biggest year of stockholder disbursements since 1930. Obviously, any such trend would have a dynamic effect on stock market prices.

Another factor contributing to optimistic sentiment has been the more conservative trend noticeable lately in Washington. There is also the belief of many, well-founded or not, in ultimate "inflation," and the expectation that continuing cheap-money conditions will cause many investors to move out of low-yielding bonds in favor of income offered by common stocks.

• **The Other View**—Not all Wall Streeters, however, think that industrial swing-over from war to peace production will be accomplished with so little actual damage to the economic structure as some appear to believe.

For one thing, the less optimistic don't altogether agree with the bull prediction that industrial production in the transitional low year is likely to be higher than any annual rate seen before 1941.

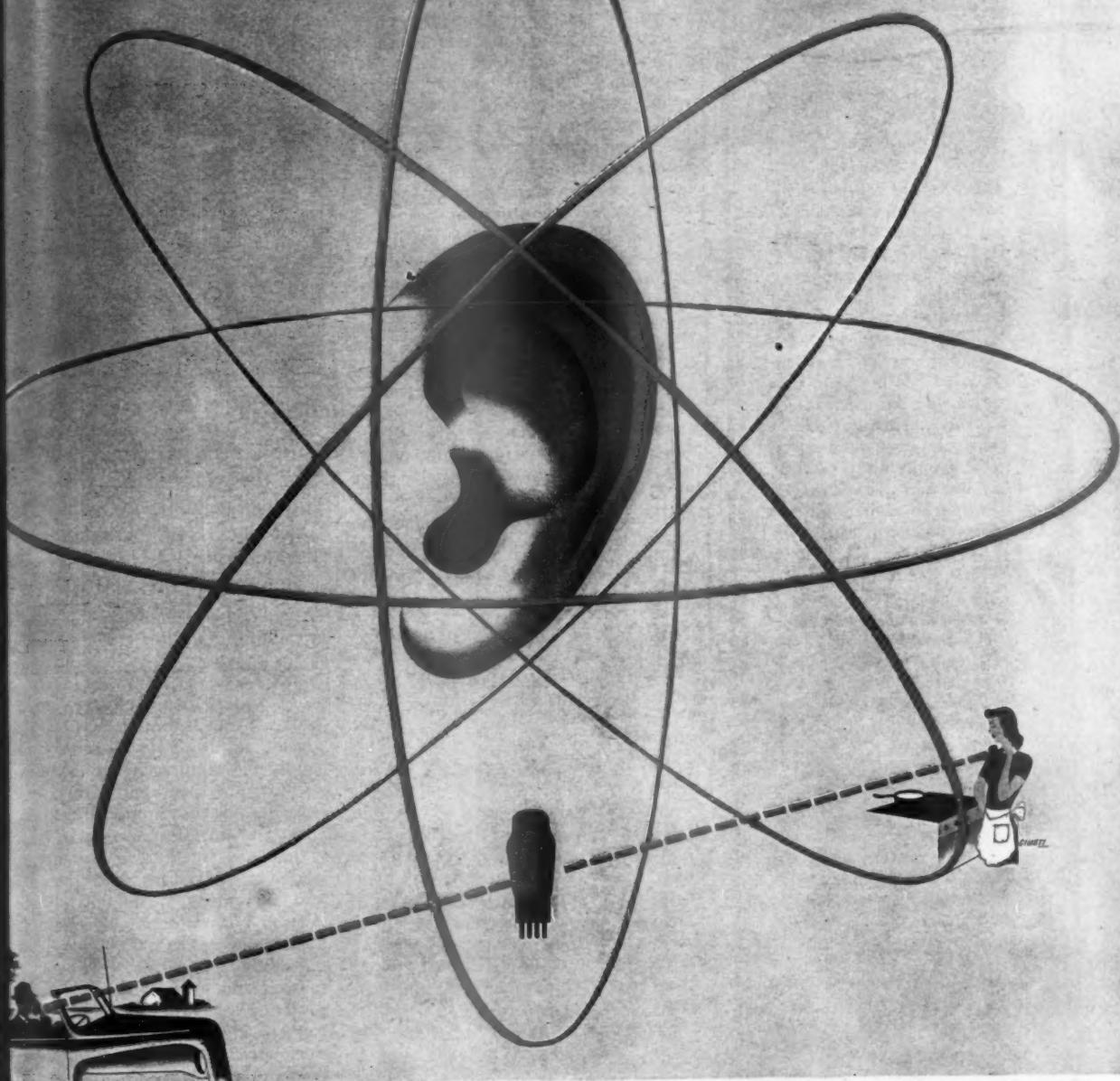
They are not so sure, either, that large-scale cancellations of war orders and the resulting increase in unemployment, as well as serious labor trouble, won't have some repercussions on consumers' willingness and ability.

• **Fearful of a Spiral**—That group wouldn't be at all surprised to see the economic structure badly strained as a result of the withdrawal of the wartime spending which has been its main problem for so long. Moreover, they think that a depression spiral might be set in motion by unemployment and a serious wave of strikes, which breeds fears that would constrict consumption—buying—might thoroughly deflate commodity prices.

The bulls, however, are well aware that such a contingency is remote possibility. They likewise admit that they are not wedded to their present outlook. Instead, they intend to watch the situation carefully as it develops, and they are ready to switch immediately to the other side of the fence if things show any signs of not working out in the manner they confidently expect.

• **Things to Watch**—Among the danger signals they intend to watch over coming months will be the possibility of a "buyers' strike" against excessively high

*You'll be phoning from your car by ELECTRONICS!*



BE HOME EARLY . . . How is the family? How about a show tonight?" . . . In the not too distant future you may be phoning your car enroute to your home.

Raytheon engineers expect car-to-home telephones to become as familiar as radio-ground communications. Radio phones between dispatcher and engineer will increase railroad efficiency. Office "incomings" will save millions of steps. Public

address systems will raise the morale of workers in factories. . . . This is communications, growing branch of the new science of electronics—the electron at work through the vacuum tube and its equipment.

Raytheon's twenty thousand workers are now building electronic equipment and tubes for the Army and Navy. After the war, Raytheon will offer business a better way to do the job . . . by electronics.

Aug. 18, 1942  
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## READY FOR V-J DAY?

The job with top priority today is, of course, knocking Japan out of the war. Next in importance to the alert executive is what happens after V-J Day. Will his new products be ready? Will his plant be set for speedy production? Has he explored his markets to make sure his products will win acceptance?

Does he need more capital? Would his position improve with wider distribution? In short, is his financial house in order for V-J Day?

These are vital questions and expert help may be needed to find the answers. Since 1888, the firm of Hornblower & Weeks has aided in the expansion of American industry by underwriting and distributing sound capital issues in many fields. This long and varied experience will be helpful to those faced with such problems. A call upon a Partner at any Hornblower & Weeks office may be the first step in the solution of your post-war adjustments.

## HORNBLOWER & WEEKS

40 Wall Street  
New York 5, N. Y.

Since 1888—Financial Service  
Adapted to Your Requirements

Offices:  
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prices for the new peacetime goods, though this does not appear likely to happen unless price controls are lifted too swiftly or competition isn't sufficient to hold prices in check.

They don't think the faint possibility of a deflation cycle should be ignored by stock market participants, either, since such a trend could conceivably be set off if next year's world crops were abnormally large. A similar deflation spiral could be touched off by intense competition for industrial markets since, with financially strong war-developed companies competing with established companies, a vicious price-cutting war could quite readily develop.

• Other Possibilities—Likewise faintly possible, but not likely, is a future deflation spiral started off by the dumping of government surplus goods, even though there are no current indications that such holdings are sufficiently heavy to cause any damage to "private markets." And a deflationary movement could also result if the Treasury in the coming months inaugurated a program designed to cut down its debt too rapidly.

Particularly remote, the bulls think, is the possibility that there will be any drop in national confidence sufficiently serious to start a depression during the reconversion period. Offsetting any chance of this, they insist, is the support afforded by the present huge savings of individuals, the continued heavy payrolls of the many segments of industry that face no reconversion pause, inventory purchases, the industrial expansion that has been long planned, and many other factors.

• Discriminating—Nevertheless, bullish though they are, they are only currently recommending selective issues to their clients. As a general thing, the small companies which did so well because of the war now seem less attractive to them than the big corporations. The rails, also, with some exceptions, aren't as attractive to the group as formerly. Neither are the aircraft, coal, metal fabricating, shipbuilding or shipping, and some other groups.

Selectivity, in fact, has become the group's watch word in guiding their clients through the postwar period. The bulls are warning that constant reappraisal of the prospects for industries and stocks will be necessary from here on if the fullest benefits are to be obtained from the future upward market movements they insist are ahead.

• Well-Heeled—Industry, as a whole, is entering the postwar period well-heeled with cash. It recently was estimated that corporate working capital had reached a \$47,000,000,000 level, a gain of \$25,000,000,000 scored over the last five years.



## BURNING AWAY SCORCH

An old hand at turning pale peop-  
tan, the sunlamp has a new job  
turning scorch spots white (above).  
Developed by Westinghouse Lamp  
Division in cooperation with a cloth  
manufacturer, the new process u-  
tilizes ultra-violet rays, which have  
bleaching effect on cloth fibers.

American manufacturers, moreover,  
take such a cheerful view of the year  
ahead, according to a survey by the  
Dept. of Commerce, that they are now  
planning to spend more than \$9,000,  
000,000 in the immediate future  
on plant and inventory expansion.

Some \$4,500,000,000, in fact, is ex-  
pected to be earmarked for plants, equipment  
and alterations; \$2,800,000,000 for in-  
creasing inventories of nonmilitary  
goods; and \$1,900,000,000 for in-  
creasing trade receivables or credits. The  
railroad and utility groups, also, are ex-  
pected to be figuring on similar expen-  
diture of \$1,500,000,000.

• Financial Plans—About 25% of the  
contemplated outlay by manufacturers  
is expected to be secured through bank  
loans and long-term public financings.  
The expenditures by the utility industry  
will be financed by the companies them-  
selves, but about 35% of railroad spend-  
ings will be obtained through open  
market offerings of securities.

As a result, it's not surprising to find  
the commercial banks and Wall Street  
security underwriting houses likewise  
optimistic over the postwar outlook.

The banks don't expect their busi-  
ness loans to soar as they did in 1945.

1920. They do, however, expect to be brisk in their loan departments, and Manhattan's big banks are sending men to their payrolls now so as to be prepared to handle the additional business anticipated. Also, most commercial banks are all set for the biggest volume of consumer credit loans they have ever been called upon to handle (BW-Jul. 21 '45, p60).

The New-Issue Expectations—Wall Street's investment banking firms look at an increasing number of "new money" stock flotations in the months ahead and a continued high rate of refunding operations as long as money rates remain cheap. They appear confident, as well, that the latter will show no radical change upwards for some time. And they claim, also, that the recent stickiness of several new bond issues, which big bond buyers thought richly priced for purchase (BW-Jul. 45, p68), represents nothing but a pause rather than the start of any "buy-strike" apt to result in an upping of interest rates on future new offerings. The U. S. Treasury's postwar policies will not be known until Secretary Fred Vinson, its new head, announces his philosophy of money rates and of public debt. Rumors have been rife, however, that important changes may be made involving increases in the Treasury's short-term rates and the Federal Reserve's differential discount rate (BW-Aug. 4 '45, p62).

War Loan Considerations—Wall Street thinks it safe to assume that the new secretary desires a stable, steady government bond market during the postwar period. In any event, they doubt that any changes drastic enough to rock the boat will be seen until the eighth War Loan drive, now generally expected to be held late this year, is safely out of the way.

Nevertheless, there are indications that war contract cutbacks have had an adverse effect in some industrial areas and the Treasury's never-ceasing campaign to sell savings bonds to the small investors.

For Example—Two big Detroit banks are said to have sold considerably fewer bonds in the first half of 1945 than in the same 1944 months, and to have experienced a sharp increase in their redemptions of the same issue.

Sales, in fact, dropped off from \$88,000,000 to but \$71,000,000, according to reports, and redemptions rose from only \$12,000,000 to around \$45,500,000. It was expected that layoffs would increase redemptions and cut sales in such areas, but the increase in redemptions in this instance is said to have exceeded even the most pessimistic earlier predictions.

This advertisement appears as a matter of record only and is under no circumstances to be construed as an offering of these securities for sale, or as a solicitation of an offer to buy any of such securities. The offering is made only by the Prospectus.

150,000 Shares

## W. T. Grant Company

3 3/4% Cumulative Preferred Stock

Par Value \$100 Per Share

Price \$100 per Share

(plus accrued dividends from July 1, 1945 to date of delivery)

Copies of the Prospectus may be obtained in any State from such of the several Underwriters, including the undersigned, as may lawfully offer the securities in such State.

## LEHMAN BROTHERS

August 8, 1945



ACCIDENTS, LOSSES, leave a trail of worry that can only be satisfactorily relieved by the helpful assistance of a friendly, efficient Insurance Agent or Broker.

In insurance matters, it pays to deal with an Agent or Broker. Our companies have more than 10,000 agents throughout the United States, any one of whom is ready and eager to help you when trouble strikes.

Dependable

As America

AMERICAN SURETY COMPANY



NEW YORK CASUALTY COMPANY

AGENTS AND BROKERS EVERYWHERE

# MARKETING

## Muzak Gets a Sturdy Rival

World Broadcasting System, Inc. prepares to move into the wired music field with programs for industrial plants, banks, and other businesses, and advertising-music service for chain stores.

One problem Muzak Corp. hasn't had in its pioneering of the wired music field has been competition.

The war years and the accompanying shortage of equipment, telephone wires, and manpower partly explain that phenomenon. But even more important are the specialized requirements of the field which have deterred would-be operators. To be a success takes a sizable transcription library, program know-how, and money—lots of it. Muzak still owes the North American Co., preferred stockholder in Associated-Muzak Corp., the Muzak holding company, \$4,000,000, borrowed by Muzak years ago to finance research (BW—Sep. 14 '40, p.44).

• **Rival Moves In**—Last week, World Broadcasting System, Inc., emboldened

by the success of Decca Records, Inc., its parent corporation, in moving in on the major record companies (BW—Jul. 21 '45, p.28), prepared to move in on Muzak.

Busy on his other projects—the Committee for Economic Development, University of Chicago, Encyclopedia Britannica, Subscription Radio (BW—Jan. 13 '45, p.90)—William Benton, who took over control of Muzak in 1941, has been inclined to let Muzak roll along on its own momentum. To World Broadcasting, with its strong financial backing, a transcription library of 3,000 recordings thought suitable for wired music, and years of radio programming experience, the opportunity looked too good to miss. • **Variety of Services**—Before launching its new venture World Broadcast

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In the field of chemical and food processing, two factors can eat heavily into profits . . . impurities and equipment corrosion. Pfaudler glass-lined steel equipment minimizes both at small cost.

As an extreme example, take chlorination. No process is more corrosive. It exacts a heavy toll in equipment. And chlorinated products must also meet certain purity standards. For these reasons, manufacturers of chlorinated products depend upon Pfaudler glass-lined steel process equipment.

Other chemicals, pharmaceuticals and many food products are contaminated by minute traces of metal. Here again, this hazard is eliminated through the use of Pfaudler equipment because Pfaudler glass is resistant to all acids, except H.F.

#### Check WITH PFAUDLER

It costs nothing to find out what we can do; it may cost plenty if you do not. Pfaudler engineers have been aiding the manufacturers of C.P. chemicals, pharmaceuticals, biologicals, rubber specialties, cosmetics, beverages, foods, dairy products and a host of others for 61 years. And if glass-lined steel isn't indicated as the cure, then our line of alloy equipment may prove the right answer. The Pfaudler Co., Rochester 4, N. Y.

WORLD'S LARGEST MANUFACTURER OF GLASS-LINED STEEL EQUIPMENT

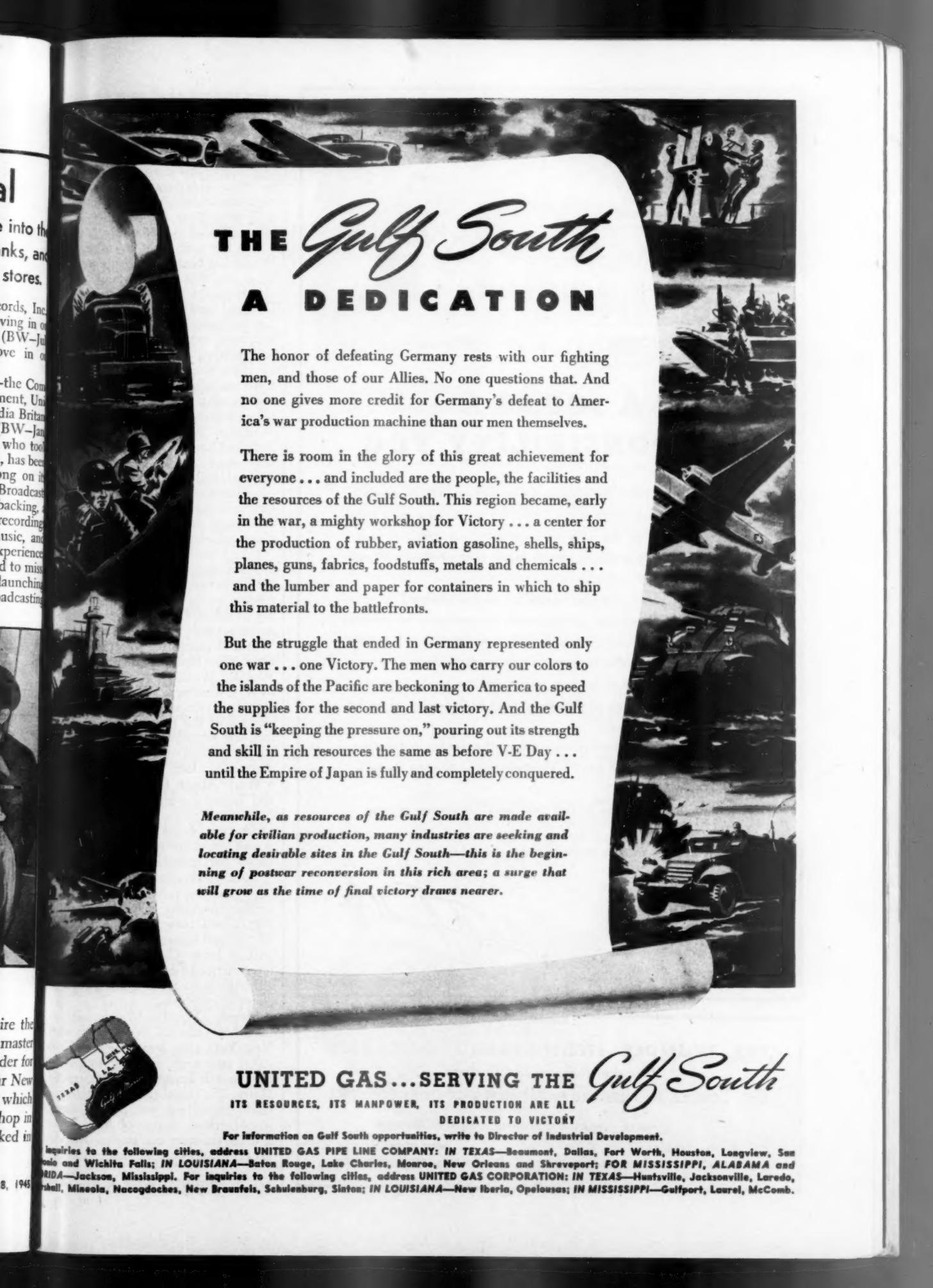
**PFAUDLER**

ENGINEERS AND FABRICATORS OF CORROSION RESISTANT PROCESS EQUIPMENT



#### SUPERCAKES FROM SUPERMARKETS

With mouths watering, crew members of the U.S.S. Los Angeles admire the cake model of their ship—handiwork of Max Spoth, Oxford-educated master baker for the Great Atlantic & Pacific Tea Co. Making such cakes to order for special occasions is a new service offered by 27 A. & P. supermarkets near New York; throughout the country 50 markets now have bakery departments which sell "homemade" specialties. Eventually A. & P. aims to have a bake shop in each of its 6,000 U.S. stores. Fancy cakes, designed by Spoth, are cooked in central bakeries by chefs trained under him. The price: 60¢ a lb.



## THE *Gulf South* A DEDICATION

The honor of defeating Germany rests with our fighting men, and those of our Allies. No one questions that. And no one gives more credit for Germany's defeat to America's war production machine than our men themselves.

There is room in the glory of this great achievement for everyone . . . and included are the people, the facilities and the resources of the Gulf South. This region became, early in the war, a mighty workshop for Victory . . . a center for the production of rubber, aviation gasoline, shells, ships, planes, guns, fabrics, foodstuffs, metals and chemicals . . . and the lumber and paper for containers in which to ship this material to the battlefronts.

But the struggle that ended in Germany represented only one war . . . one Victory. The men who carry our colors to the islands of the Pacific are beckoning to America to speed the supplies for the second and last victory. And the Gulf South is "keeping the pressure on," pouring out its strength and skill in rich resources the same as before V-E Day . . . until the Empire of Japan is fully and completely conquered.

*Meanwhile, as resources of the Gulf South are made available for civilian production, many industries are seeking and locating desirable sites in the Gulf South—this is the beginning of postwar reconversion in this rich area; a surge that will grow as the time of final victory draws nearer.*

UNITED GAS...SERVING THE *Gulf South*  
ITS RESOURCES, ITS MANPOWER, ITS PRODUCTION ARE ALL  
DEDICATED TO VICTORY

For information on Gulf South opportunities, write to Director of Industrial Development.

Inquiries to the following cities, address UNITED GAS PIPE LINE COMPANY: IN TEXAS—Beaumont, Dallas, Fort Worth, Houston, Longview, San Antonio and Wichita Falls; IN LOUISIANA—Baton Rouge, Lake Charles, Monroe, New Orleans and Shreveport; FOR MISSISSIPPI, ALABAMA and ARKANSAS—Jackson, Mississippi. For inquiries to the following cities, address UNITED GAS CORPORATION: IN TEXAS—Huntsville, Jacksonville, Laredo, Marshall, Mineola, Nacogdoches, New Braunfels, Schulenburg, Sinton; IN LOUISIANA—New Iberia, Opelousas; IN MISSISSIPPI—Gulfport, Laurel, McComb.



## A JOB IS A RESPONSIBILITY TOO

We hear a lot about the responsibility of industry to provide jobs for all who want to work. Industry wants to accept that responsibility. For the only way industry can prosper is by putting people to work—creative work that produces things that can be sold.

But what about the responsibility of the worker?

Industry prospers by selling what it produces to people who want to buy—by giving the buyer a value that is worth more to him than the money he pays out.

Doesn't the worker have a responsibility to do just that with the time, energy and skill he sells to industry when he takes a job?

There is only one realistic answer to the worker's question. "How can I get more pay?" That answer is to earn more by producing more.

Giving better value is the best way to insure getting a larger return.

That applies to both management and labor.

  
George R. Trundle Jr.  
President



### THE TRUNDLE ENGINEERING COMPANY

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spent two and a half years surveying field. As a result, World Music Service will take several forms: "Music while you work" for production plants and different variety for banks, insurance companies, and similar concerns; music in the entertainment field—hot restaurants, clubs; and music interwoven with advertising for grocery and drug stores (BW-Jun.2'45,p88).

For the past eight or nine months World has been getting up steam. So far it has been mainly supplying music to war plants, such as Eastman Kodak, Douglas, and United Aircraft, who can get priorities for equipment and telephone trunk lines.

• **Franchises Issued**—Already distributors have been franchised in Rochester, San Francisco, New Orleans, Richmond, and Toronto. Soon to get underway are franchise-holders in New York, Northern New Jersey, Philadelphia, Buffalo, Cleveland, St. Louis, and Houston. And by 1945 World hopes that this list will cover 60 cities, which considers the present U. S. potential on the basis that service can be economically sound only in cities of 300,000 more population.

Like Muzak distributors, World franchise holders will make their own decisions for telephone wires with the local companies; set up their own central studios for broadcasting; buy equipment from manufacturers who produce under World Broadcasting specifications; and rent the transcription library from World. World Music Service, headed by A. J. Kendrick, World Broadcasting executive vice-president, will get a percentage of the gross profits of distributors, will provide program patterns, and supply promotional and merchandise material for local use.

• **Wary About Chicago**—Both Muzak and World are proud of their vertical cut transcriptions which allow a much wider tone range and a more faithful sound reproduction than the usual lateral cut recording.

Both are licensed by Western Electric to use this process. Coincidentally neither company has yet announced that it will brave Chicago by offering its "canned music" service in the home port of James C. Petrillo, president of the American Federation of Musicians, although both claim to be studying the "Chicago problem."

• **Muzak Digs In**—Muzak, which to date has only 25 distributors outside New York City and serves more than 2,000 customers, is rising to the fight. Last month Benton did some rearming with Harry E. Houghton, advertising and marketing expert, was put in complete administrative charge of Muzak Corp. at time and its associate companies—Associated Muzak Program Service, and Associated Muzak

publishers. And Houghton has plans of his own. There'll be a bigger advertising budget to cover a consumer advertising campaign. Where Muzak now offers four different types of program service, Houghton plans to have twelve.

**New Fields Studied**—Houghton is carrying a survey made of market potentials in cities Muzak so far has not invaded. He has mapped a program that will take Muzak into new industrial markets, such as the garment industry and laundries, and if a new technical improvement in the system pans out, may be economically feasible to serve cities of less than 250,000 population. Consumer tests are being made to determine whether Muzak, too, will mix advertising with music for grocery and drug stores. Houghton personally is handling negotiations with the American Society of Composers, Authors & Publishers that may lead to a contract for royalty collections direct from Muzak rather than from each individual subscriber (BW—Feb. 17 '45, p90). Trade talk even has Muzak giving thought to the record business.

## Nielsen Saves Day

Easing of materials for audiometer enables him to renew contracts with networks and get new clients for service.

Merits of the competing systems for measuring audience reactions to radio have long been the subject of hot debate among both advertisers and radio executives.

**Automatic Recorder**—Much of the controversy has centered lately around the rating service offered by A. C. Nielsen Co. Nielsen program ratings are based on the basis of actual round-the-clock listening in sample homes as determined by the Nielsen audiometer, a mechanical contrivance attached to the test set which automatically records on tape each time the receiving set is turned on, the station to which it is tuned, and for how long. When the tapes are correlated with program logs for local stations, they provide a continuous minute-by-minute record of how the receiving set was used.

**A Wartime Handicap**—The Nielsen Radio Index was first offered to advertisers and broadcasters in 1943 after several years of pilot testing with 200 complete audiometers (BW—Dec. 7 '40, p38). At that time, several hundred additional audiometers had been installed in test homes in Philadelphia, Pittsburgh,



## SPEEDS YOUR VOLUME

For bullets or payrolls, automatic machines speed volume production.

The Model 285 payroll machine is so automatic the operator needs only to insert forms and record information . . . the machine does the rest to give you the speed you need for modern payroll accounting.

*It is the ONLY completely electrified payroll machine that computes and prints balances automatically.*

*Also it automatically numbers, dates and counts the checks, accumulates earnings and deductions, computes net pay, tabulates from column to column, prints the balance, protects the checks, and returns the carriage ready for the next check.*

In ONE operation the 285 writes your Payroll Journal, Employee's Statement of Earnings and Deductions, the Individual Earnings Record, and the Pay Check or Cash Envelope!

The flexibility of the 285 allows it to meet requirements of future changes in forms or procedures.

Manufacturers, utilities, banks, retail stores, and other businesses say the 285 makes an "inside" profit. They say its automatic features create the speed to give you volume production and to maintain control figures always up to date.



**COMPLETELY ELECTRIFIED**

Let the 285 give YOU volume production. Your nearest Remington Rand specialist will analyze your needs without obligation. Phone him now, or write to us.

**BUY, KEEP WAR BONDS**

**Remington Rand**  
**Buffalo 5, N. Y.**

# "Our 11 BAKER TRUCKS have given us

## CONTINUOUS 24-HOUR SERVICE

for 4 YEARS"



*Routine periodic inspection and lubrication pays substantial dividends in the operation of Baker Trucks at Thompson Aircraft Products Company's mammoth new Cleveland plant.*

Here is a good example of what can be expected of Baker Trucks in the way of *continuous operation*, when properly cared for. According to N. J. Shibley, Superintendent of Building and Property Maintenance at Thompson, their Baker Crane Truck and ten Baker Fork Trucks are as good as new after serving three shifts per day for nearly four years—the equivalent of 12 years of normal service. No truck has been overhauled, there have been only a few minor mechanical failures, and maintenance has been almost negligible.

Actual time out of service averages less than  $\frac{1}{2}$  hour per day, per truck, divided as follows:

Daily check of Hydraulic System . . . . .	5 min.
Battery changes (2 min. each shift) . . . . .	6 min.
Weekly lubrication (45 min.)—per day . . . .	7 min.
Other maintenance (Tires, brakes, inspection and adjustment of electrical controls, etc.)	
45 hours per month for 11 trucks—per day	<u>10 min.</u>
Total . . . . .	28 min.

Except for the above and for a ten minute period between shifts when trucks are idle, they have been giving "round-the-clock" service for four years and, says Mr. Shibley, "if we continue to take good care of them, they should last indefinitely." That's *Continuity!*

To help you keep your Baker trucks operating continuously and to insure long life, write for "Industrial Truck Care Pays You Dividends."

**BAKER INDUSTRIAL TRUCK DIVISION** of The Baker-Raulang Company  
2164 West 25th Street • Cleveland, Ohio  
In Canada: Railway and Power Engineering Corporation, Ltd.

**Baker INDUSTRIAL TRUCKS**

Cleveland, Detroit, Milwaukee, Chicago, and St. Louis market areas. But then wartime material controls made impossible to build and install additional audimeters.

Since that time various clients contracted for the Nielsen service—notably the National Broadcasting Co., the Columbia Broadcasting System, and some big advertisers such as Procter & Gamble—have grown increasingly negative about the N.R.I. reports.

• **Their Money's Worth?**—Candid critics said that what they got for the money wasn't worth what they paid reported \$70,000 a year in the case one network).

Making all allowance for Nielsen's claim that his audimeter service covered an estimated 27% of radio homes in the Central and Eastern time zones, they contended that it was impossible to compile national program ratings on the basis of a check on just a thousand radio sets (the maximum Nielsen monitored), no matter how carefully these sets were located to get a fair cross-section by type of family, size, age, and income level.

• **A Showdown**—Dissatisfaction reached the point a few weeks ago where the chains frankly said that they would drop the Nielsen reports, a decision which wrung no tears from competitive radio research organizations, notably the Cooperative Analysis of Broadcasts (Crossley ratings) and C. E. Hooper Inc., both of which use telephone check-in public

Nielsen was in a bad spot, for the public repudiation of his audimeters by the big networks might jeopardize his whole radio service, threaten his total investment which he calculates in figures approaching a million dollars.

• **Victory, Plus**—But salesman Nielsen pulled through. Last week he came east from his Chicago headquarters and, after extended conferences, was able to announce that both the networks had signed new two-year contracts. Also, he had been successful in forestalling P. & G.'s cancellation, which, because of the soap company's radio preeminence, might have touched off a wave of defections. General Mills reportedly quit, but to offset this, he added three new clients—Carnation Milk, Erwin's big supermarket chain, Wasey & Co., and the Reader's Digest—boosting the number of his subscribers to 47.

In a very real sense, Nielsen was saved by the bell. The approaching end of the eight-year war and the easing of materials made it possible for him to promise a vastly expanded N.R.I. program. By Jan. 1, 1946, he expects to install 300 more audimeters in the New York metropolitan area, California, Georgia, Louisiana, North Carolina, Oklahoma, Oregon, and

South Carolina, Texas, Washington, West Virginia.

New Services—Additionally, Nielsen institute new services: separate ratings for the Pacific Coast; program rating for the New York, Chicago, Pacific Coast, and Cincinnati areas; a "dimes per dollar" rating; "full coverage audience" rating based on the percentage of N.R.I. homes that could receive a program over the stations serving the area; and a biweekly Advance Report in pocket size that gives subscribers up-to-the-minute comprehensive data on audience reactions.

Despite these new features, radio row is willing to bet that both chains will be buying the Nielsen service under the service contracts at a price below what they have been paying on the basis of the time zone number of audimeters in service.

## Meat Revolution

Big volume demand for repackaged frozen meat might set traditional techniques of packing and retailing.

Swift & Co. and a few smaller packers 15 years ago burned their fingers in union meat cutters' prejudices in an attempt to market prepackaged meat. Hooper's one cheerings. For the product, doomed the effort. Since then, the virtues of the idea—standardize heavy self-service for customers, standardization of brands, grades, and sizes, in figured freshness, and better profits for packers—have not changed. Nor has Nielsen backtracked one inch.

Volume Is Key Factor—But in the interval a consumers' demand has blossomed that could revolutionize the trade's traditional techniques of meat packing and retailing (BW-Mar. 28 '42, p48). As has restocked before, public opinion could because of ham-roller labor's objections if it imminent enough a sufficient volume to permit a wave of frozen-meat prices that would compare favorably with fresh meat prices.

Housewives have been impressed with the big success of U. S. war shipments Digest space-saving precut, boned, trimmed, frozen meat. Locker plant patrons stores of frozen meat bought in advance, have been the envy of less fortunate neighbors. Many a housewife made for years for a new refrigerator with a built-in frozen food compartment or a Jan. 1 separate freezer storage unit.

How Soon?—Whether and how soon sizable amount of this yearning will be translated into refrigerator purchases is question for both refrigerator makers



## "Pardon me—but I'm looking for the Status Quo"

The good ol' Status Quo may not be just around the corner, Mr. Office Manager, but things look brighter. Now the major confusions of wartime offices yield to the major problems of reconversion . . . as various departments return to their former functions. Of course, that means headaches for you, but there's a man who can lighten your woes. He is—

### ART METAL'S "MR. EXPEDITER, O.D."

He's called "Doctor of Offices" because his healing mission is to straighten out officetangles. He helped

on many wartime problems. He'll do as good a job on reconverting.

Call him in! There's no charge for his services. Ask him how to make the best of the equipment you have—and of what he might be able to get for you. And ask for his helpful book, "Manual of Desk Drawer Layout". Just call your local Art Metal Branch, or write Art Metal Construction Co., Jamestown, N. Y. If your Personnel Manager would like a copy of our new book on personnel records or your Sales Manager a copy of "Command Post for Sales Managers", simply write us.

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SYSTEMATIZED EQUIPMENT AND RECORDS FOR BUSINESS



## Save Time With

**T**  
WEBSTER ELECTRIC  
**Teletalk**

... Adds hours to your work week

Graybar Specialists in 86 cities can show you how to increase your operating efficiency by eliminating the time-loss of walk-around-and-talk communication.

Teletalk Intercommunication Systems save time by permitting an executive to get information more quickly, issue instructions without waiting—without leaving his desk—merely by the flip of a key.

Whether your office is large or small—whether the office you want is a block away or right next door—it takes time, wastes time, to get up and go there. That's why a Teletalk System pays for itself in a few months' time—and then far more than pays for the small amount of power it consumes from the light circuit.

Ask the Graybar Specialist to analyze your needs, and recommend the Teletalk installation most suitable and economical.

Look up the Graybar house in your classified telephone directory and have your secretary call, now, while it's on your mind. You won't regret it.

Graybar Electric Company, Inc.  
Graybar Building, New York City

Graybar Offices in 86  
Principal Cities



and meat packers. The packers are conspicuously silent as refrigerator makers push hard for postwar volume sales of the freezers and freezer-refrigerators.

To bring frozen meat sales in volume big enough to excite the packers, consumers must have units that will hold low temperatures (zero or below). But the housewife will find little dollar-and-cents advantage in buying frozen meat unless she buys larger quantities at a time than her custom in buying fresh meat. Prewar refrigerators will be adequate if she decides to buy small volume, as now seems unlikely.

• **Packers Are Ready**—Packers have standard freezing facilities which they can enlarge almost overnight to meet whatever demand develops for prepackaged frozen meat. They are dodging unnecessary costs and possible labor conflict now by letting the refrigeration industry carry the ball. When meat profits are sure, packers will step in.

The field in the race for postwar refrigerator profits is crowded with a record number of starters to make boxes with 1 to 2 cu. ft. and capacity freezer units and separate freezer storage units

of 4 to 6 cu. ft. But they can be trusted to cut their suit to fit the market.

• **Big Potential Market**—Rosiest forecasts of industry enthusiasts are 1,000,000 home freezers of 4 to 6 cu. ft. capacity in the first two postwar years; fill an existing need for 3,827 mechanical refrigerators; that for several years the demand will be near 3,750,000. But it will be a long time before any significant production of freezer units can share a major share of the expectable postwar meat consumption.

Big packers figure that within five years sales of frozen beef might equal 10% of total consumption. Less meat will be frozen because it stands up less solidly under this treatment. Packers stand to profit tremendously if a large share of all meat is eventually boned and trimmed in the packing house and frozen, because they can make better more economical use of such material than can anyone else. They estimate that they could save up to 50% in shipping costs on prepackaged meat.

• **Effect on Retailers**—If prepackaging comes, it will revolutionize retail distribution methods and will also proba-

## Tomorrow's Special: Packaged Produce

One wartime practice fostered by the labor shortage—self-service at the fruit and vegetable counter—is here to stay. As a result only lean supplies of packaging materials are holding back a marketing innovation.

• **Spoilage to Profits**—It all started when super food markets couldn't get enough clerks to sell vegetables. In desperation managers dumped produce in bins, let customers pick, weigh, pay at check-out booths. It worked fine but boosted spoilage because of consumer "testing."

Then some unnamed clerk took a lard tray, strapped down tomatoes with gummed tape, penciled prices, went to call the boss to see how nice the display looked. It was all bought up when they returned—or so the story goes.

• **National Trend**—Now chain stores nationwide are packaging with materials at hand. Lard trays (right), berry boxes, cardboard cartons are among present makeshift substitutes and equipment men are reported working on special packaging machines to mechanize repacking.

Because produce packaging builds more profits by reducing spoilage and labor costs, and increasing volume sales, produce wholesalers seem destined to become repackers as well.

Vegetable growers in California and Florida are reported keenly interested in the movement, may themselves pack their products in consumer units.

• **Less Work for Mother**—Spinach and mixed salad vegetables in cellophane bags have been on the market for some time, may lead to another logical step—preparation of vegetables—when overnight air shipments of produce hit their stride. Tomorrow, housewives may buy fresh vegetables with all waste portions cut away, almost ready for the pot.



## WEBSTER ELECTRIC

### Provides Intercommunication to Coordinate Navy Operations

Instant, unfailing intercommunication is an absolute essential aboard the huge carriers, battle ships, and other units of America's Navy.

It was natural that the U. S. Navy turned to Webster Electric to supply an intercommunication system geared to the severe and unusual needs of service at sea. This rugged construction brings to the use of heavy industry the same speedy, dependable contact that Teletalk Intercommunication Systems have given business offices for many years.

Today, on many of our first line ships this Navy Intercommunication System is used to coordinate the activities of shipboard life, which compare in many cases with those of a small city.

Shown here is a station of this Navy system that provides amplified and selective voice communication in a system which includes from two to eleven units. A number of conversations may be carried on at the same time. Signal lamps give indication of in-coming calls, busy stations and answers to calls.

This Navy Intercommunication System is but one example of many ways in which Webster Electric engineers have contributed their long experience in high fidelity sound equipment to production for victory. Many of these developments of Webster Electric will one day be available to increase the productive efficiency of business everywhere through more perfect intercommunication.

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corporated, and American Tele-  
phone and Telegraph Company.



Let's All Back  
the Attack . . .  
Buy Extra  
War Bonds

# WEBSTER ELECTRIC

Racine, Wisconsin, U.S.A. • Established 1909 • Export Dept.: 13 E. 40th Street, New York (16), N.Y. Cable Address "ARLAB" New York City

"Where Quality is a Responsibility and Fair Dealing an Obligation"

## OUT OUR WAY



"Have been constantly using it, since receiving initial shipment."

"Have just ordered the third lot of 2500 lbs."

"Have been able to eliminate constant scrubbing."

"After trying out various methods, SPEEDI-DRI is the one certain solution."

"Conservatively estimate an annual saving of \$1000."

WE HAVE HUNDREDS of letters like the above in our files. Many plants, where oil and grease used to make floors slippery and dangerous, are now ordering SPEEDI-DRI by the carload.

SPEEDI-DRI is successful because it does the job and it's easy to use. It's safety's magic carpet. It's an oil-thirsty, granular material that soaks up oil or grease from any kind of floor. SPEEDI-DRI is non-inflammable and fire-retardant. It will help prevent dermatitis caused by oil-soaked shoes. It eliminates complicated cleaning-machines, or trained workers. You just spread SPEEDI-DRI wherever oil or grease accumulates. It soaks-up the oil and grease. Then you sweep it up with a broom.

One plant took fourteen men off floor-maintenance when they found SPEEDI-DRI. Pin your business-card to this advertisement and mail it to us, for a big FREE sample.

**SUPPLIERS:** East—Refiners Lubricating Co., New York 1, New York.  
Midwest & South—Waverly Petroleum Products Co., Philadelphia 6, Pa.  
West Coast—Waverly Petroleum Products Co., Russ Bldg., San Francisco 4, Calif.



eliminate many retail meat shops. Meat will almost automatically become an item to be handled in grocery stores. Mass marketers see a definite advantage to themselves in such a setup.

With labor trouble in the offing when any such upset of retail custom should impend, grocers may be driven to compromise methods. New frozen food departments of Independent Grocers' Alliance stores, now scheduled to open this fall (BW-Jun.9 '43, p. 59) plan to have the stores' meat cutters slice up and prepackage meat to be dispensed through self-service freezer cases.

Locker-plant operators doubtless will increase in importance as factors in meat sales. Besides buying carcasses and handling customers' beef and lamb carcasses, sides, and quarters for cutting up and packaging, they seem likely to add lines of packer-frozen meat cuts and also to become retail distributors of home refrigerators and freezer units.



### EGGS UNDER PRESSURE

Into a Transcontinental & Western Air pressure chamber at Kansas City go a brace of hatching eggs—to prove they'll not become addled by extreme barometric changes. Both eggs produced normal chicks: "Altitude Joe," who in embryonic form took a simulated 1,364-m.p.h. power dive, and "Stratosphere Sue," who went to 60,000 ft. at 800 ft. a minute. Tests on scheduled flights have proved that hatching eggs can be flown to war-torn European farms (BW-May '44, p. 59) but TWA makes its claim as the first to subject them to such extreme stratospheric conditions.

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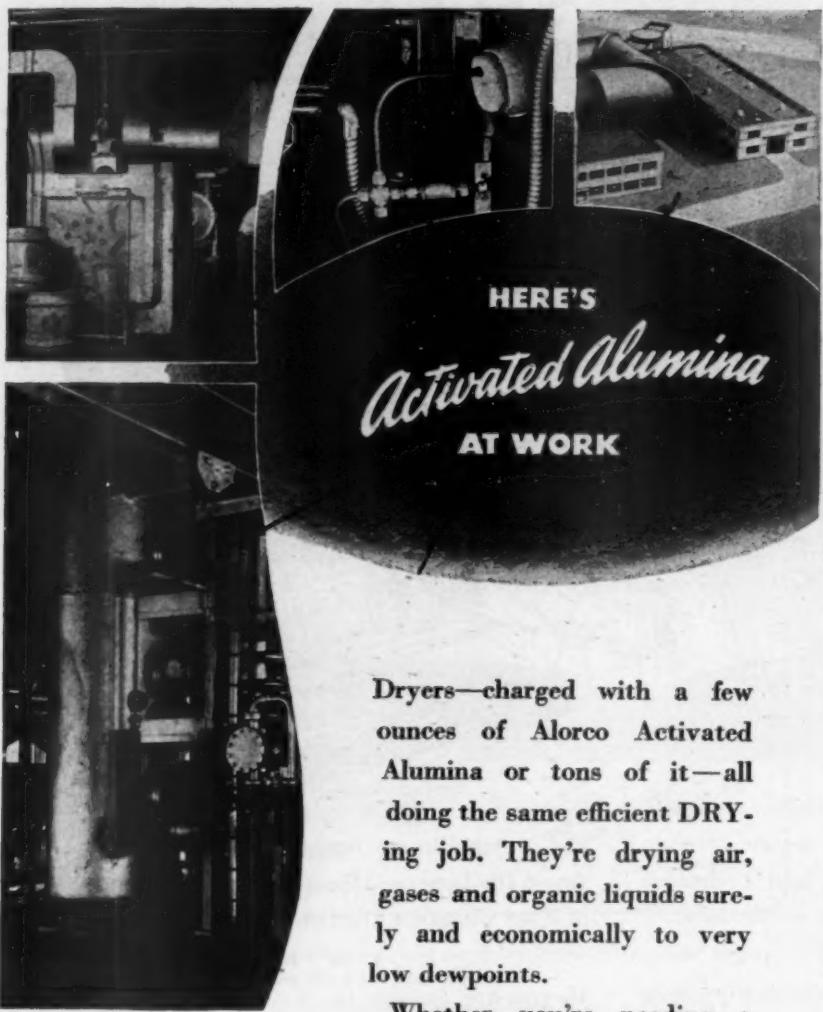
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**Dryers**—charged with a few ounces of Alorco Activated Alumina or tons of it—all doing the same efficient DRYING job. They're drying air, gases and organic liquids surely and economically to very low dewpoints.

Whether you're needing a cartridge to put in a refrigerator line or an automatic machine for some continuous process, there's a manufacturer already making it. No need for your engineers to devote valuable time to designing special apparatus.

We'll gladly advise you on the type of Alorco Activated Alumina suited to your use. And we'll put you in touch with manufacturers of drying equipment. **ALUMINUM ORE COMPANY, Subsidiary of ALUMINUM COMPANY OF AMERICA, 1935 Gulf Building, Pittsburgh 19, Penna.**

## ALUMINUM ORE COMPANY



*Aluminas and Fluorides*

## Stores Expanding

Macy's West Coast decision is followed by decision to build in New York suburb and report of entry into Hollywood.

Expansion plans of department stores continue to make news (BW-Jan. 6, '45, p86).

Last week R. H. Macy & Co., New York City department store, announced that it would add a \$1,000,000 branch in suburban White Plains, N. Y., to fast growing national chain (BW-Feb. 3-'45, p82) within three years after the end of the Japanese war.

• **Going to Hollywood?**—Meanwhile, notwithstanding reports continued to circulate that Macy, which recently announced purchase of O'Connor, Moffat & Co. in San Francisco (BW-Jul. 14-'45, p32), would also operate after the war in Hollywood, on the site of the Hollywood Hotel (BW-July 21-'45, p24).

In connection with Macy's entry into San Francisco, the trade raised startled eyebrows at what promises to be a sharp contrast: I. Magnin & Co., exclusive West Coast specialty shop, announced plans to erect a \$1,000,000 nine-story store of white marble and black granite at Geary and Stockton streets, where Macy will be on both sides.

• **Ovington's in Los Angeles**—Other expansion plans confirmed during the week included Ovington's, Fifth Avenue (New York) gift store, purchase of Warren Hotchkiss, Inc., exclusive gift shop on Los Angeles' Wilshire Boulevard. Ovington's only other branch is in Miami Beach, Fla.

In the air were persistent reports that John Wanamaker, one of New York's oldest department stores which had steadfastly clung to its original location in lower Manhattan, had finally succumbed to the march of New York's main shopping district to upper Fifth Ave.

There were unconfirmed reports that Wanamaker would move into the ground floor of a new office building to be erected on the site of the Hotel Marguery, 270 Park Ave.

## ODLUM BUYS LIBERTY

Liberty Magazine, sold several times over in recent months by the rumor-mongers, last week admitted it had accepted the \$2,000,000 offer of investor Floyd Odlum, president of the Atlas Corp. (BW-Jul. 14-'45, p90).

As of Aug. 20, Liberty Magazine

and the three movie magazines (Greenland, Silver Screen, and Movie Show) which make up the corporate package, will be under new ownership. Odlum's purchase of stock from the Unico Press, Inc. (which acquired control by default on a printing bill), and from publisher Paul Hunter will make little difference for the time being in their management or format.

Hunter and Ed Maher, editor, as minority stockholders, will carry on management and editorial policies of the magazines. However, one new edition has already been made to the staff in the person of Jacqueline Cochran, Odlum's wife, who has ambitions as a Pacific war correspondent.

Liberty has lost a pretty penny since it was started 21 years ago by Col. Robert R. McCormick of the Chicago Tribune and Capt. Joseph Patterson of the New York Daily News. With the other magazines in the group, Liberty is currently earning \$150,000 a month before taxes. Circulation now exceeds 250,000.

Some in the trade look for Odlum to put the movie magazines to good use through tie-ins with RKO films (Atlas owns 46% of the common stock) and Walt Disney Productions (Atlas owns a major share of common).

## TELEVISION TRIAL FLOPS

Neither facilities nor witnesses were available last week when Judge Samuel Blake, in Los Angeles, called what hoped would be the first court trial of television (BW-Jul.14'45,p93). As a result, television still awaits its first judicial test.

Attorneys notified the court that their clients were in process of settling their real estate squabble without benefit of judge and jury. And the Pasadena concern which was to have furnished the transmitters, receivers, and screens, both in the courtroom and at the bedside of an invalidated litigant, was unable to furnish the necessary equipment and technicians anyway.

S.

Warner Bros., convinced that businessmen here and abroad will turn to us in educating new markets, plans to make 16-mm. commercial films to order after Jan. 1. . . . Thwarted in her efforts to set up permanently in the newspaper publishing business on the West Coast (BW-Apr.21'45,p96), Dorothy S. Thackrey, publisher of the New York Post, has asked the Federal Communications Commission to approve purchase for \$348,800 of 84% of the stock of radio station KYA, San Francisco (5,000 watts).

# Tops in Protection



YOUR property certainly rates the best protection against unwanted visitors that you can provide, so why not let our trained engineers check your needs and make recommendations. You'll be under no obligation.

Cyclone Fence, Gates, Window Guards and Wire Mesh partitions have proved their value in thousands of plants of every type. Cyclone has many advantages. It is built by experts to give long, satisfactory service. Its many special features include posts that stay straight, rails that don't buckle, gates that don't sag. Long recognized as the leader,

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You'll find our big, 32-page fence catalog a valuable reference book. Crammed with pictures, facts and specifications covering many styles of Cyclone Fence, Gates and other property safeguards. Whether you need a few feet of fence or several miles of it, you should have this useful book. It's free. Write, or mail the coupon.

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We'll send you our free, 32-page book on fences. It's full of facts, specifications, illustrations. Shows 14 types of fence. Before you choose any fence for your property, get the facts about Cyclone. Mail this coupon today.

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Residence. Approximately..... feet.



UNITED STATES STEEL

# LABOR

## For Labor: Readjustment

**Unions see beginning of a bitter struggle for survival, while individual workers face scramble for jobs. Pressure on industry will be tremendous as wartime government controls lose effectiveness.**

Industry may be able to adjust itself to peacetime far more readily than anyone could foresee a month ago (page 15), but to labor the sudden collapse of Japan spelled sheer chaos as far ahead as it could see.

To labor, the end of hostilities and large-scale cancellation of war contracts means the wiping out of some five million war jobs, the end of overtime and incentive pay which—in lieu of wage increases—have sent take-home pay to levels well above what the mass of workers received before in peacetime.

• **What It Means**—Individually, workers see peace in terms of personal survival in jobs, of a struggle to meet bills while costs of living continue to rise and income shrinks. Others see it in terms of a mad scramble for jobs, and the necessity of stretching unemployment compensation over the barest needs for hand-to-mouth existence.

And the unions know that they are at the end of a honeymoon of easy organizing, the beginning of a struggle for existence which will be particularly bitter in the heavy industries. At the end of the first World War, unions were smashed by industry after wartime growth to then-record highs. This time labor is watching suspiciously.

• **Terrific Pressure**—Business and industry will be under terrific pressure from workers and unions to maintain jobs, increase hourly wage rates as hours of work decline and take-home pay is threatened.

And, with the end of the war, the no-strike pledge given by labor goes into the ash can.

At the same time, the government's supreme wartime authority in labor-management relations is ended.

• **Can Cases Be Certified?**—Technically, of course, the National War Labor Board and the War Manpower Commission can legally continue in existence until six months after peace but manpower controls are out, and NWLB's wings are clipped, now that the war ends, for by law the board handles only those disputes that interfere with the war effort. Nevertheless, for the immediate present the various controls which have been established—

most importantly over wages—remain technically in effect until rescinded.

So far, there has been considerable talk of "gradualized" vs. immediate relinquishing of these controls, of "human reconversion" problems, of the need for some postwar government mechanism to effect peaceful settlement of labor-management disputes. Nothing has materialized.

• **Too Little, Too Late**—The end came too fast. The established government controls definitely lose their effectiveness with ending of the no-strike pledge. Planning on the labor front is too little, and too late.

Thus, the whole matter of labor relations is dumped back into the laps of the two principals. After four years, collective bargaining is the rule again—and no holds are barred.

Whether labor and management will revert to the dog-eat-dog usage that characterized the days of the sit-down strikes or whether some semblance of orderly bargaining will miraculously prevail depends largely on their ability to get together at the negotiating table on a give-and-take basis in the next few months.

• **A Conference?**—Conceivably, the contemplated labor-management conference (BW—Aug. 11 '45, p98) will produce some Deus ex machina by which government can effectively reassert its authority and enforce a new set of rules. Whether Secretary of Labor Schwellenbach will agree to summon it depends upon whether he can satisfy himself that conditions are favorable for common agreement on at least some major issues.

Giving weight to the conference plan is the fact that NWLB and the no-strike pledge came out of just such a meeting of labor and management shortly after Pearl Harbor. Then, however, there was a strong element of patriotic fervor to prompt concessions.

• **Different Motivation**—No such factors will enter into any conference summoned now. Instead, promptings will be selfish; they will be based on a desire to get—or retain—as much as possible without making any move which would bring to either labor or management, a



### CLASSES IN CLEANLY SERVICE

Earnest and attentive, dining car employees attend classes to learn proper methods of handling the food they serve to the nation's wartime traveling population. Nine eastern railroads furnish the 6,000 students; New York City supplies the site—Central Harlem Health Center; and the U.S. Public Health Service provides the instructors. Courses cover sanitary measures, personal hygiene, and health—highlighted by moving pictures.

case might be, the onus of hamper-reconversion.

Proposals for the conference so far have been made secondary to Schwellenbach's revitalization of the U. S. Dept. of Labor. Fundamentally a job of centralization and consolidation, the reorganization is designed to make the department an active force in labor relations, ultimately to restore to the government at least a part of the authority it has held over labor matters during the last four years. But whether this objective can be attained fast enough to bridge the hiatus between wartime and peacetime labor controls is doubtful.

No Place for NWLB—One thing is plain, and that is that there is no place in Schwellenbach's reorganized department for the NWLB—a circumstance about which the two large labor groups have different feelings. AFL advocates complete abolition of NWLB as soon as possible after the war is over." C.I.O. is less eager to see the world go. The difference of opinion results from the relative strength of the at the bargaining table.

AFL's key unions, such as those in the building trades and its teamsters, occupy a strong bargaining position. A mechanism for labor-management bargaining on a national basis already has been set up in the construction industry. AFL is set to stand on its own feet, sees no need for NWLB.

Cutback Jitters—C.I.O., on the other hand, has cutback jitters. Much of its present power rests on the unsubstantial foundation of inflated industrial employment; now it stands to lose heavily membership, finances, and influence. Employers with which it deals—such as Detroit automotive producers—are eternally closely knit, likely to adopt coordinated policy. Since they have fewer jobs than potential, trained workers, they hold a distinct bargaining edge. C.I.O., consequently, would not be reluctant about accepting some management successor to NWLB. Union memberships, rather than numbers, will have much to say about labor relations. Restlessness has been shown in increasing outlaw strikes.

Concessions Foreseen—To strengthen the hand of labor officials against hot-heads, some concessions to them are vital—and will be forthcoming. NWLB proposals for a liberalized wage policy are now before President Truman, likely will be approved at least in part. Far from what labor wants—an outright break in the Little Steel formula—the proposals are reported:

- (1) To permit voluntary increases without NWLB scrutiny if no price rise will be necessary.
- (2) To permit increases in excess of the Little Steel limit, even if price

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increases must result, in cases of "real hardship" from downgrading; loss of overtime and incentive pay. Since this would cause a flood of "hardship" cases, this point might be tightened up, but not to an extent that would remove the slight hope given to workers for pay increases in the last days of NWLB. This is certain, however: Government will keep its thumb firmly on payrolls, one way or another.

• Pegged Contracts—Serious aspect of the wage issue is evident in the fact that 50% of contracts signed during the war are pegged either to the end of the war or to a change in government wage controls. Contract reopenings will bring a flood of wage demands.

Tempering them, Washington officials hope, will be the psychological restraint which may come to workers as jobless rolls grow.

In order to spread available jobs, make possible unfettered employment in reconversion, manpower controls were lifted immediately. Industry will revert to a 40-hour week.

• Large-Scale Problems—WMC will bow out after a campaign to encourage young workers to return to school, housewives to leave war jobs. Manpower problems will be assumed by Schwellenbach. They are large-scale, involving the necessity of finding jobs for 5,000,000 displaced war workers and at least 3,000,000 discharged servicemen within the next six months.

Displacements and production shifts will bring a record burden of discrimination and unfair labor practices cases for the already overtaxed National Labor Relations Board, a prewar quasi-judicial agency now destined to go into the Dept. of Labor. Jurisdictional disputes and questions of collective bargaining representation also are bound to soar.

• For Congress—With the whole labor scene in a state of flux, only Congress has its work cut out for it. Due to convene from a summer recess one month early, with militant Labor Day warnings fresh in their ears, members of the Congress know they are expected to knuckle down to legislation necessary to aid the United States in its sudden shift from war to peace.

Labor has specific ideas of what must be forthcoming—and the recent British Labor Party landslide has inclined Congress toward listening to them.

• On the List—High on the list are an increase in unemployment compensation to \$25 a week for 26 weeks, on a national basis; an increase in the minimum wage from 40¢ to 65¢ an hour; the so-called full employment bill which would provide a broad program of public works; and an expansion of social security.

## Wage Guarantee

C.I.O.'s Steelworkers w  
1,200-hour pledge; break ice  
campaign for annual pay plan  
nation's steel industry.

One of the prime objectives of C.I.O.—and in particular of its United Steelworkers of America—is establishment of the principle of a guaranteed annual wage in industry. It is now clear, however, that the demand is not insatiable: Unions will accept less, and gladly.

• First Victory—Recently Philip Murray, C.I.O. president, and the Steelworkers won a first toehold for the guaranteed wage plan in the steel industry when the Wildman Manufacturing Co. of Norristown, Pa., accepted a guarantee clause in a new contract. From the standpoint of workers covered (less than 325), the victory was relatively minor. Yet this first adoption of the guarantee was heavily charged with significance.

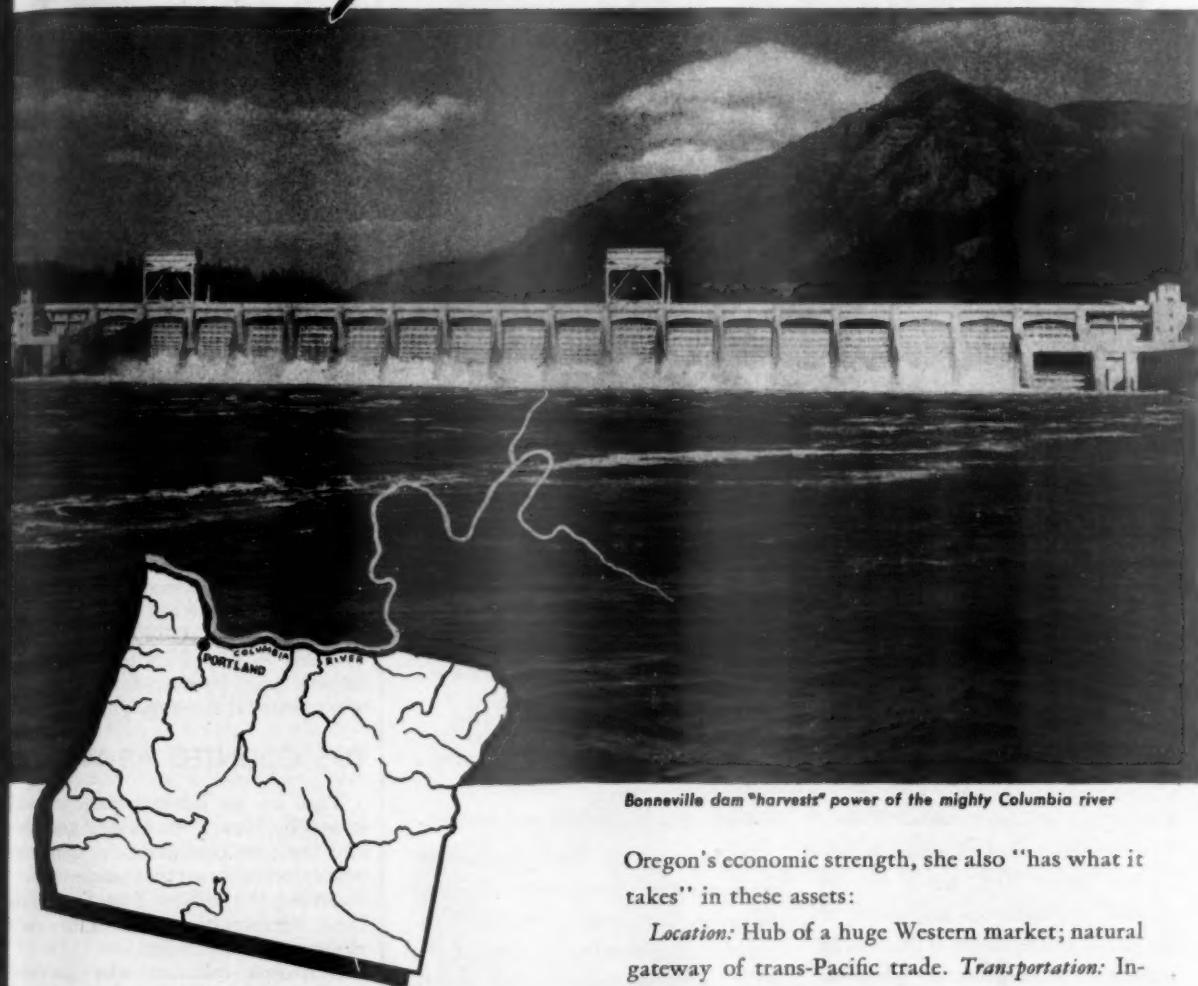
It (1) gives the plan's labor advocates their first actual support from a company in heavy industry; (2) indicates that the unions are willing to make their guarantee demand a matter of give-and-take collective bargaining; and (3) provides an actual case study for the new federal commission set up to report on wage guarantees (BW-Aug. 4, p102) as well as for management.

• Predictable Volume—The Wildman plant is a peacetime producer of knitting and hosiery machines. Its production records for the past 40 years follow a definite pattern. Volume of work there can be predicted with reasonable accuracy, and output schedules can be planned well in advance with assurance that they will remain fairly constant.

This made possible Wildman acceptance of the guarantee clause, decided upon, according to Kenneth Howland, vice-president and general manager, because the company found that the principal worry in the minds of its employees was the fear of losing their jobs during reconversion, and the concern thought it might be a good thing to remove this worry by a guarantee.

• 30 Weeks' Guarantee—But Wildman did not pledge itself to go the whole distance on the issue of guaranteed wages. It had found that it could guarantee 1,200 hours of work (30 weeks' employment) for all employees with the company five years or longer (about 70% of the entire personnel). That was as far as its management believed it could safely go. Acceptance of the proposal by the Steelworkers was clear indication that the union is willing

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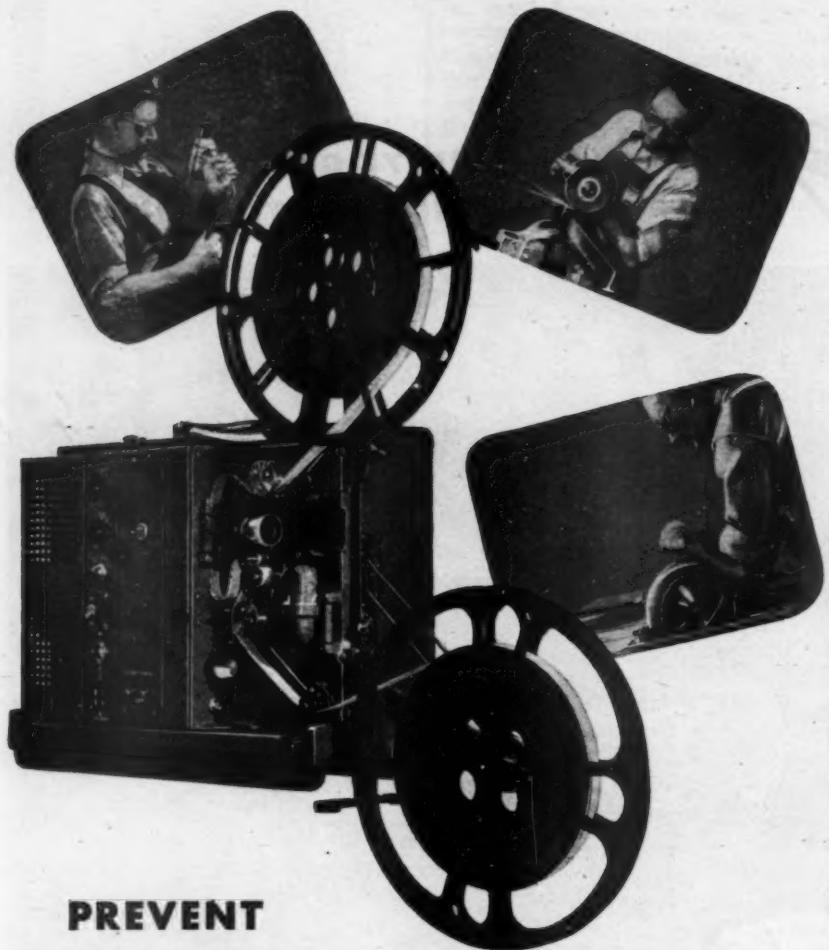
Plant sites presently still are available and reasonably priced in this state "Farthest West." And Oregon still has its friendly welcome for the newcomer seeking industrial opportunity.

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consider company ability to make guarantee and to tailor its demands fit individual cases.

Moreover, the Steelworkers readily accepted company provisions that (1) employees who quit or are discharged for cause forfeit the 1,200-hour guarantee; (2) employees guilty of unwarranted absenteeism are to have the hours of work they missed deducted from the 1,200-hour guarantee as it applies to them; and (3) in the event of a strike the company is to be relieved of the guarantee as to the employees striking.

The clause adopted provides that both straight and overtime hours are to be credited against the 1,200-hour guarantee, and that if the company does not provide work for any part of the guaranteed period, its covered employees are to be paid for the unworked period at their straight hourly rate.

• **State Pays the Balance**—In accepting the 1,200-hour guarantee, the Steelworkers were not sacrificing completely their case for a full 52-week guaranteed income. Pennsylvania's unemployment compensation law allows \$20-a-week jobless pay for 20 weeks. Thus with guaranteed wages for 30 weeks and 20 weeks' unemployment compensation Wildman employees are assured weekly income for virtually the entire year.

Such a combination of guaranteed wage and unemployment compensation (a solution which has also been under consideration in C.I.O. United Auto Workers' headquarters in Detroit) may become the pattern for compromises on agreements on the wage guarantee issue.

### **TIPS COUNTED AS WAGES**

Tips are an integral part of wages earned by New York waiters and therefore must be considered in computing unemployment compensation benefits more according to the New York State Labor Dept. interpretation of the state's unemployment insurance law.

Employers—whether the swankiest white tie hotel dining room or the corner luncheonette—are required to keep records of each waiter's weekly table sales. Under an agreement with the Hotel & Restaurant Employees International Alliance (A.F.L.), tips are arbitrarily computed at 10% of total table sales. Employers must pay up Ahern employment compensation taxes on wages plus this allowance for tips.

The 10% basis for tips is not without opposition. Representatives of the New York State Pharmaceutical Assn. recently urged that drug stores be exempt from the tax on tips. Sandwich counters, the quick lunch trade, they said, isn't in the kind to leave tips. A state labor department hearing reserved its decision.

## Layoff Limitation

If work-week exceeds 40 hours, then union must be consulted before the force is reduced, arbitrator holds.

Companies that have contractual relations with a union should not lay off workers if their work-week exceeds the normal 40 hours without first consulting the union on advisability of reducing hours of work, an arbitrator appointed by the Boston regional war labor board has decided. The arbitrator ruled for the United Steelworkers of America (C.I.O.) in a case which was brought by the union against the Leland Goff Co., Worcester, Mass., a subcontractor.

**Beyond the Contract**—The fact that contract does not provide specifically for prior consultation does not, in the opinion of the arbitrator, make consultation unnecessary in any case involving "rates of pay, hours of work, and other conditions of employment" covered by contract.

The company was ordered to reinstate, with back pay, 26 workers who were laid off due to a war contract cancellation, while other employees continued working a 55- to 60-hour work week. Consultation with the union was considered in planning any new layoffs, with a view toward "spreading work as equitably as possible" among all employees. However, the arbitrator emphasized that if enough work does not exist (presumably for a 40-hour week) the employer is under no "obligation to create work."

**A War Expedient**—The arbitrator interpreted federal regulations providing for more than a 40-hour work-week as merely an expedient to help the war effort.

"If the war effort made overtime hours unnecessary, then the 40-hour week became normal, and it was reasonable to assume that the employer could reduce the hours worked to 40 throughout the plant as long as there was work enough to give each employee 40 hours of work by spreading the total of total hours worked," the arbitrator, Michael Ahern, declared.

**Board Agrees**—Backing up his decision, the regional war labor board said that company and union must consult prior to layoffs at a plant operating with overtime hours. If agreement is reached to exempt layoffs without reducing the work week, the company may make such layoffs in accordance with seniority provisions of its contract. If no such agreement is reached, work hours must

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## THE LABOR ANGLE

### "Suitable"

The coming battle over what constitutes "suitable employment" may rival that over a legal definition of "seniority" as it applies to veterans.

All over the country, thousands of workers, displaced from war jobs, are applying for unemployment compensation. To get it a worker must show that he cannot be referred to "suitable employment." U.S. Employment Service still has lots of job opportunities to offer, but are they "suitable?"

Extreme cases are easy to decide; for example, no USES official would consider an unskilled labor job suitable for an unemployed lens grinder. But many cases are borderline.

General practice is to have contested cases decided by a referee who is a state official, subject to all the pressures that organized labor knows how to apply. Appeals from a referee's award may be taken to the courts by an employer, whose direct interest in an individual case is likely to be negligible, or by a higher state official who is also politically sensitive to the unions. So far, the courts have largely supported claimants. They held in a recent New York State case that a man who had earned \$15,000 a year was entitled to unemployment compensation after refusing a \$5,000 job to which he had been referred.

Continuation of such a trend involves two dangers: (1) introduction of a new rigidity into the labor market, inhibiting the quick movement of labor into plants needing employees; and (2) a drain on state compensation funds that could put some of them in a shaky financial position.

There's an important test case coming between the Michigan Unemployment Insurance Compensation Commission and the United Auto Workers (C.I.O.). When mass dismissals hit Willow Run, U.A.W. representatives quietly passed the word to members to refuse jobs that did not utilize their full skill and experience and that paid less than they had been earning. Such jobs are scarce in Detroit. Refusals to accept any of the more plentiful openings for semiskilled workers at less pay have resulted in removals from the state compensation rolls. U.A.W. charges the commission "is forcing labor to set a lower wage scale—some-

thing the unemployment act was never intended to do." Anticipating a rebuff by the commission's referee and appeals board, it is preparing to file suits.

### Factor

A new labor factor is appearing in the operating divisions of the southern railroads. Negro locomotive engineers, firemen, and members of train crews, in revolt against the Jim Crow policies of the railroad brotherhoods, are choosing to be represented in collective bargaining by the Brotherhood of Sleeping Car Porters, Negro-led A.F.L. union which has hitherto been largely limited in its jurisdiction to employees of the Pullman Co.

Heartened by the welcome its organizers are getting from these other rail workers, B.S.C.P. may extend its recruiting efforts to groups of Negro employees outside railroading.

### Change

As the National War Labor Board enters what may be its final stage, it is important to note that NWLB has swung to a line of reasoning on maintenance of membership that is in contrast to its former one.

Originally m. of m. was awarded on the finding that the organizations favored could show a case history of employer opposition justifying the need of union security. The theory was that if they were free to strike they would get the union shop for their own protection.

Now, m. of m. is awarded, as in the recent Herald Tribune case, when a union meets "the general test of responsibility." To NWLB that means keeping the no-strike pledge, holding reasonably frequent elections, and making reasonable financial reports to members.

### Favor

The biggest favor organized labor now wants from President Truman is the removal of Gen. Hershey from his post as Selective Service Director in which he administers the veteran re-employment guarantee. The unions are convinced that Hershey can't be budged from his "superseniority for veterans" stand, and that this position is essentially antunion.

be reduced to 40 a week before layoffs can be made.

The interpretation thus arrived at gives leeway for unions in other cases, in which the Gifford case might be precedent-setting. Industrial unions generally favor the spread-the-work plan, but some craft unions want more hours for fewer workers.

## Self-Sustaining

Labor Herald, published on the coast by former newspapermen, pays its own way with return from circulation and ads.

The Labor Herald, a labor newspaper published in San Francisco and Los Angeles by former daily newspapermen and hewing to the line of sound newspaper advertising and circulation principles, is attracting attention in California—and significantly paying its own way without any subsidy from the sponsoring California C.I.O. Council.

• **85,567 Net**—From a meager beginning (7,000 circulation and a hand-to-mouth financial existence) seven years ago, the Labor Herald has grown to potent 85,567 net circulation and a staff of 35 full-time employees augmented by correspondents.

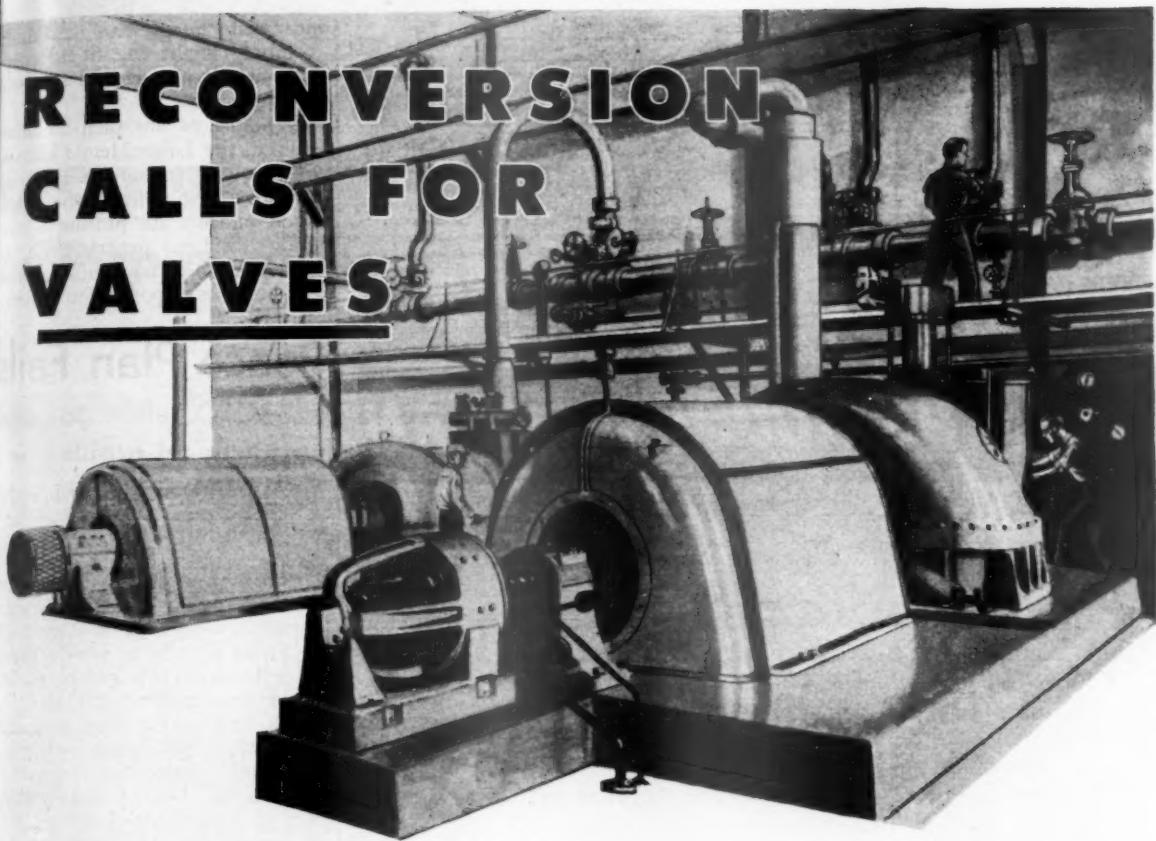
Next month the Audit Bureau of Circulations will check the Labor Herald's circulation records. The publisher is confident that an A.B.C. report will show that more than 90,000 persons have paid \$2.50 a year to have the paper delivered to their homes by mail. What layoffs, following contract cutbacks, may do to the circulation is the biggest cloud in the sky.

• **Growth Formula**—Growth of the paper—achieved, according to the publishers, without any union compulsion on members to subscribe—is attributed to: (1) growing awareness of workers of their need for full, straight coverage of labor news in a paper slanted specifically to them, and (2) recognition on the part of business—the advertisers—that labor is a responsible segment of population to be addressed as such through sound product-selling advertising.

Plans are in the making for publication of one edition in San Francisco and another in Los Angeles. At present separate editions are run off in San Francisco, with news copy for the Los Angeles area prepared by a bureau there. The object is more thorough local labor coverage, with more local advertising.

• **Other Ambitions**—After that, plans take on a grander scale: complete western coverage, then publication of a national labor weekly. And there is

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idea that "progressive" AFL members might see fit to cooperate giving the Labor Herald new-and-  
portant-status.

Whether or not such ambitions realized, the Labor Herald bears watching as an interesting and significant experiment. At a time when shrinking union budgets are putting a crimp in union-subsidized papers, ability of labor press to stand on its own financial feet becomes important to unions.

## **Peace Plan Fails**

C.I.O. effort to solve jurisdictional problem with merger is rejected in vote of farm implement workers.

The formula hopefully advanced the C.I.O. as a cure for jurisdictional disputes, merger of the rival unions has failed signally to resolve the differences between two groups of workers in the farm equipment field.

The controversy thus remaining plague the organization in the post-shakedown of industrial union jobs between the United Automobile, Craft & Agricultural Implement Workers and the United Farm Equipment Metal Workers.

• **Emphatic No**—The latter union, smaller, and left-wing, has rejected merger proposal, 29,086 to 2,250 in referendum vote. About half of union participated in the voting.

With eyes on the postwar future, U.A.W. last February sought "rescue" workers at Peoria (Ill.) Caterpillar Tractor and Chicago International Harvester plants when a factional split threatened to split U.F.E.M.W. between them (BW-Apr. 14 '45, p84). U.F.E.M.W., established in 1938, appealed to C.I.O.'s newly established three-member jurisdictional dispute committee.

U.A.W. added the claim that C.I.O. members in the two plants were not being represented adequately by U.F.E.M.W., and that, besides, U.A.W.'s jurisdictional field had been staked out in 1936 to include agricultural implement workers.

• **Council Recommends**—To the recent U.A.W. executive council meeting in Minneapolis, the jurisdictional committee issued its first report and recommendations: that difficulties between the two unions could best be resolved by merger. U.A.W.'s board approved the plan, but U.F.E.M.W. has by its vote refused to sacrifice its autonomy.

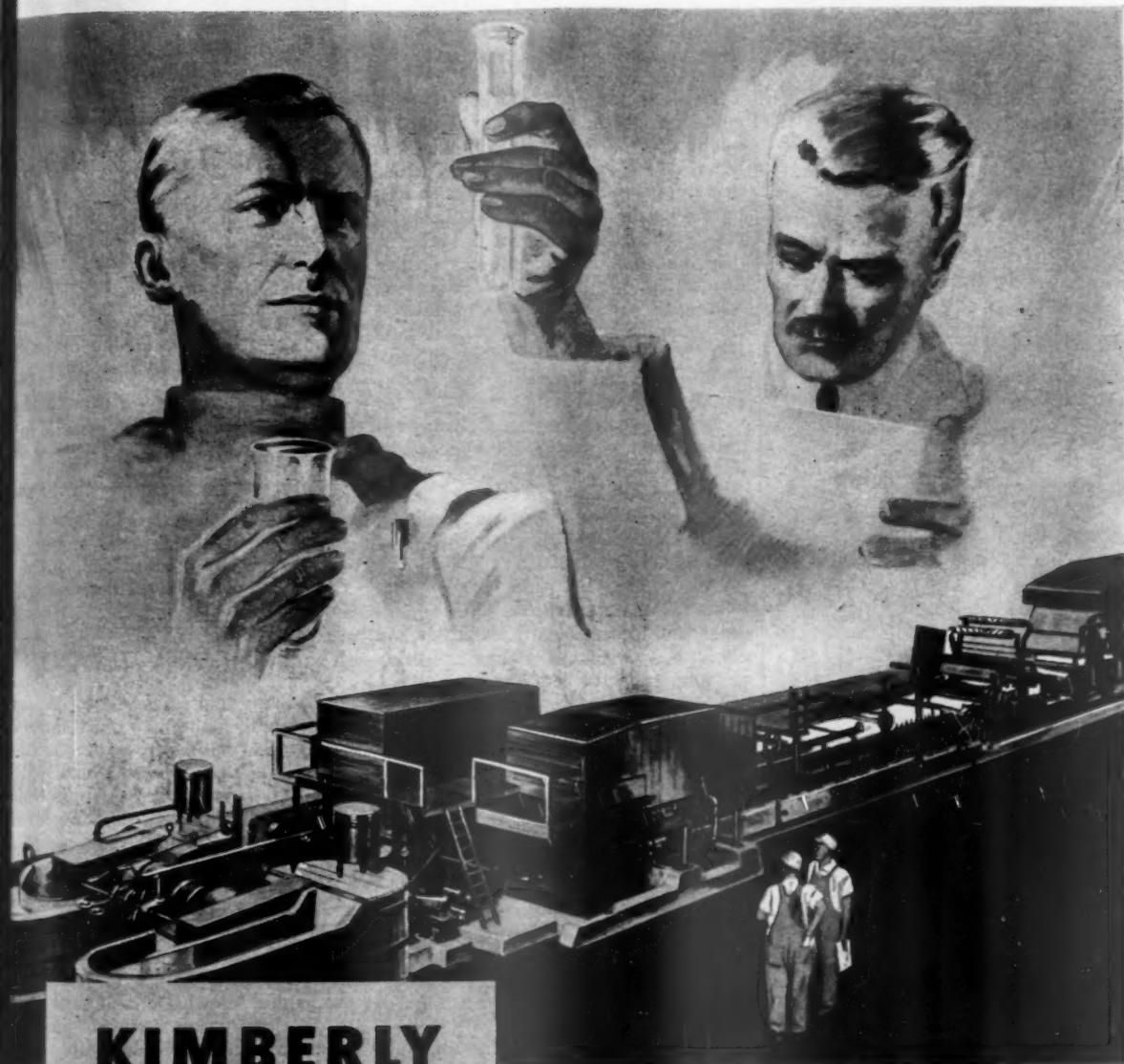
Thus C.I.O.'s executive board found the issue still in its hands, and

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PAPER PACKS A WAR PUNCH—DON'T WASTE IT!

INSURANCE  
AIR  
TRANSPORT LINES  
  
Many of the country's  
leading carriers enjoy the  
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For progressive handling  
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CONNECTICUT GENERAL  
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hot. Either it must turn a blind eye and deaf ear to continuing jurisdictional disputes between U.A.W. and U.F.E.M.W., disputes of a type which C.I.O.'s internal structure was designed to curb, or it must face the possibility that U.F.E.M.W. might withdraw in protest against any new attempt to act.

### DECERTIFICATION CASES

The National Labor Relations Board has always reserved the right to reconsider, on its own initiative, its certifications of collective bargaining agents. But until recently it had steered strictly away from entertaining any requests from employers for decertification of unions in their plants.

Recently, however, NLRB has accepted, and acted upon, two such requests. In one, Marshall, Meadows & Stewart, Inc., Auburn, N. Y., was denied decertification of a union which was named bargaining agent only six months earlier by a 121-to-119 vote. The company said that 164 employees favored dissolution of the union, since six months of negotiation had failed to win a suitable contract. NLRB held that "a certification should be effective for a reasonable length of time . . . customarily one year."

In the second case, a hearing was ordered on a request by the Wentworth Bus Lines, Inc., Dover, N. H., to decertify an A.F.L. union because heavy labor turnover and loss of many original supporters had left the union without the support of a majority.

Individually, the cases are of relatively minor importance. Their significance lies in the fact that NLRB has established a precedent under which war industry employers may petition for decertification of a union after layoffs have cut down plant forces.

### RAIL PHYSICIANS ORGANIZE

Professional attaches of the Southern Pacific General Hospital in San Francisco have organized what is in fact if not in name a trade union—the Railroad Physicians & Surgeons Guild.

The guild, with 40 members including dentists, was organized for collective action and mutual protection in the relations of the doctors with the hospital's board of governors.

Although ownership of the employees' hospital remains with the railroad, active management recently passed into the hands of the employees through a decision of the National (railroad) Mediation Board giving organized workers the controlling voice on the board (BW—Mar. 31 '45, p103).

Best explanation of the doctors' move was that they hoped to anticipate any



### THE REAL TEST IS AHEAD

Happy over his victory in Detroit mayoralty primary (BW—Aug. 11, p5), Richard Frankensteen, 38-year-old vice-president of United Auto Workers (C.I.O.), now faces the real test election. As nominee he becomes spearhead for activities of C.I.O. Political Action Committee, a target for those who fear any growth in labor's political power.

eventuality which might arise either from the new management or from any of the prepaid medical care proposals circulated both in California and Washington.

### JOB AID FOR VETERANS

Realizing that efficient job placement of returning servicemen and women depends upon familiarity with what the duties and special training entailed, the Royal Canadian Air Force has issued a 166-page "Employer's Guide" describing air force trades and occupations. The booklet provides a method of checking a job applicant's background, training abilities, and potentialities.

The RCAF has devised three basic group tests for veterans, taking into consideration their ability to learn, their mechanical knowledge, and their ability to do clerical work. RCAF personnel may take these tests voluntarily prior to discharge. Tests are graded and the results are coded on a special form.

On applying for a job, the veteran presents his form as he would a letter of reference. By consulting the RCAF handbook and cross-checking code letters, the prospective employer can get a fair idea of whether the applicant is adapted to the job.

# THE INTERNATIONAL OUTLOOK

BUSINESS WEEK  
JULY 18, 1945



With the downfall of Japan, you can expect a series of rapid economic changes which will have important repercussions on world business.

Shipping officials take the announcement that the British liners Queen Mary, Queen Elizabeth, and Aquitania will be demobilized and returned to the Cunard Line after only three more trips across the Atlantic with American troops as a tip that at least a minimum, fast, civilian passenger service will be resumed as soon as possible on key world trade routes.

**Cargo ships will be released more slowly, but ship lines believe that such a mass of freighters will be freed from war duty that bottoms will be available to most world ports except those of Japan within the next six to eight weeks.**

The surplus of tankers expected to be available at once should put an end to the gasoline shortage everywhere within a few weeks.

Practically all European ports have been reopened since V-E Day, but handling facilities are still restricted in such badly battered ones as Rotterdam, Cherbourg, and Hamburg.

Le Havre, though handling the bulk of the U. S. troop exodus from Europe, should soon be able to receive large incoming cargoes beyond Army needs.

Antwerp is teeming with outgoing shipments of all kinds of military equipment, part of which may now be declared surplus and sold in Europe.

**Shippers generally expect Antwerp to handle for many years the largest volume of traffic of any European port.**

Foreign trade controls are expected to be eased soon by Washington.

Demand for U. S. goods abroad will far exceed supply in many lines. No over-all export quotas have been set by any industry yet, but individual companies with prewar foreign trade experience are already seeing to it that key customers get at least minimum shipments until complete order lists can be filled.

Export-Import Bank, with \$3,500,000,000 available for loans, is not yet fully reorganized, and ready to operate on the enlarged scale expected of it.

**It won't be surprising if its capitalization is upped to \$10,000,000,000 to meet the mass of credit requirements already beginning to pour into Washington from western Europe and Latin America. Reopening of the Far East will inevitably bring a new crop of demands.**

Unless Japan's military commanders scattered through southeastern Asia refuse to accept Tokyo orders to surrender, large supplies of key commodities should become available to the Allies very quickly.

The blockade should have caused considerable tonnages of tin to back up at the mines in Malaya, the Netherlands Indies, and China. Additional stockpiles may also be uncovered in the Japanese homeland and immediately commandeered.

Stocks of rubber likely to be found in Malaya, Sumatra, and Borneo should be large, also because they could not be moved through the blockade. And planters are believed to have hidden large quantities which will come into the market with the return of the colonial governments.

Raw silk will be available in both China and Japan, but will not rate a high shipping priority until other critical commodities have been moved.

Unless consumers' goods are sent to the Orient, however, a steady return

# THE INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK  
AUGUST 18, 1945

flow of supplies cannot be expected, for it has already been proved in the Philippines that the natives will not work merely for money.

## Don't look immediately for spectacular moves aimed at the big-scale industrialization of China with the aid of U. S. capital and technical leadership.

No such plans will begin to crystallize until the Far Eastern peace pact has been written in Tokyo, and the Chinese government has been reorganized and reinstalled at Nanking.

## Indian business interests, on the other hand, have made significant initial contracts with two U. S. firms.

Following negotiations which commenced early last spring (BW—Jan. 20'45,p112), both Chrysler and Studebaker have made deals for the assembly of cars in India with, possibly, the eventual manufacture of certain parts in that country.

But the trade mission headed by J. R. D. Tata and G. D. Birla which spent June and July touring U. S. industrial plants (BW—Jul. 21'45,p44) has returned to India after placing only modest orders. Whenever the issue of blocked sterling balances is settled, they are expected to return to buy equipment for the development of India's heavy machinery and chemical industries.

## Sweden is getting the jump on other nations in a drive for Latin-American markets.

Following the signing of a new pact with Argentina, Stockholm traders have now made an agreement with Mexico by which Sweden will exchange paper and steel products for Mexican cotton, petroleum, and minerals.

In Chile, the Swedes are pursuing a trading advantage developed during the war when they created a special trading agency, Swedish Metal Industries, which created a sensation with a locally packaged razor blade, "Tops," and sold large numbers of streamlined bicycles at prices slightly lower than U. S. or British prewar lines. Another popular Swedish product in Chile is a special lightweight sewing machine.

## Modernization of Mexico's rail system is progressing rapidly.

Aircon of Kansas City has recently sent 20 electrical engineers to Mexico to start installation of a complete train telephone system on the Mexican railroads.

At the same time, British owners of the Mexicano Railroad, operating between Vera Cruz and Mexico City, are reported to be negotiating for the sale of the line to the Mexican government. The negotiations have opened just as two steamship lines connecting Vera Cruz with Havana and New York have resumed regular service.

## You can expect Czechoslovakia's trend toward the nationalization of key industries to be repeated in other Russian-dominated areas.

Predicted more than a year ago by President Benes, the nationalization program, after absorbing mines, heavy industries, banks, and the motion picture industry, threatens next to engulf the American-owned Socony-Vacuum plant south of Prague.

With Moscow expected also to dominate Manchuria after the Tokyo peace pact is written (map, page 18), Japan's vast industrial empire around Mukden is likely soon to be filling Soviet reconstruction orders.

## BUSINESS ABROAD

### Brazil Rebuilds

**Rehabilitation of railroads, enlargement of merchant fleet, and highway program attract U.S. equipment salesmen.**

**SAO PAULO**—Representatives of U.S. transportation equipment manufacturers are beginning to arrive in Brazil to angle for large orders pending as a result of government steps to rehabilitate the country's rundown transport services.

**For Railroads and Ships**—A few weeks ago, government officials announced that, in order to provide funds for immediate postwar rehabilitation of the nation's railroads, they would soon authorize the roads to levy two new surcharges of 10% each on all current rail rates. Improvement of roadbeds and purchase of new rolling stock are contemplated.

More recently, Lloyd Brasileiro, the government-owned steamship company, operating both in the coastal and transatlantic freight service, placed orders with the Ingalls Shipbuilding Corp., at Birmingham, Ala., for 14 modern cargo vessels, and with Canadian Vickers, Ltd., at Montreal, for another six pastoral vessels. The two contracts involve outlays of \$54,000,000, and will boost Brazil's total merchant tonnage to more than 500,000.

**New Highway Planned**—Now Rio de Janeiro officials report that they are preparing a road building and highway improvement program to be financed from the \$19,000,000 collected since 1940 in the form of a fuel tax. While the value of road-making machinery imports during the first quarter of this year amounted to only \$26,000, officials are prepared to spend \$10,000,000 for bulldozers, scrapers, and tractors as rapidly as United States firms will accept orders for prompt delivery, or when surplus war equipment in suitable condition is made available.

Finally, officials have announced that 100 streetcars will be bought in the U.S. to meet the demands of the Sao Paulo tramway system.

**Deliveries Begin**—First purchases of railroad rolling stock are beginning to arrive in Brazil but these will do little more than meet a crisis in transport which became so serious last year that Washington provided high construction priorities to overcome it.

The British-owned Leopoldina railway will be one of the first to benefit as deliveries commence on eight steam locomotives, the first of which has just arrived from the Baldwin Locomotive Works, Philadelphia. The Mogyana railway, in the state of Sao Paulo, is expecting the arrival of twelve locomotives and 150 freight cars.

Still in the order stage are \$3,250,000 worth of rolling stock and locomotives for the Viacao Ferrea Rio Grande do Sul, and \$4,000,000 in equipment for the Northwest of Brazil Railroad.

**Locomotives Needed**—Brazilian railways have around 3,600 locomotives—many in poor condition—but they need immediately 500 more with greater hauling power, as well as others to substitute for those which should be repaired.

It is estimated that at least \$25,000,000 will be spent for new locomotives and an additional \$25,000,000 for other rolling stock (freight cars, trucks, wheels, tanks). Imports of locomotives, cars,

trucks, other railway vehicles, and parts during the first quarter of this year were valued at \$3,300,000, against \$2,000,000 imported during the same period in 1944.

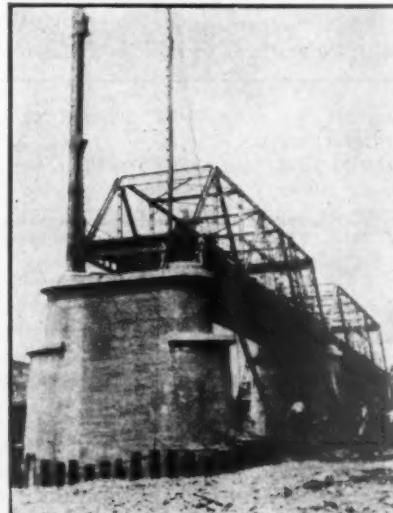
**Oil Imports Increase**—Outlook for orders in the road transport field is also brightening. Brazil expects confidently to increase its petroleum imports as soon as wartime restrictions on exports are lifted in the United States. Imports of fuel oil and diesel oil during the first quarter of this year jumped to 95,000 tons from last year's low of 45,000 tons.

Automobile, truck, and chassis imports in the same period jumped to 777 units, worth \$1,000,000, in comparison with imports of only 57 units in the first quarter of 1944. Automobile parts are also arriving in larger quantities. Brazil has been promised 10,000 chassis for trucks and buses by the U.S. this year.

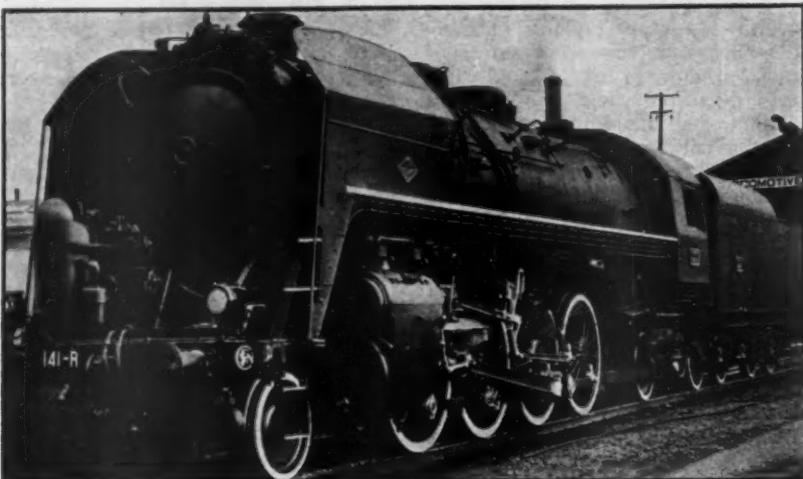
**Air Travel Grows**—Even commercial aviation, which is the best organized of all Brazilian transport, is now in-

### CONTINENTAL LINK

While Brazil is pushing expansion of its own transport system, Peru's trans-Andean highway, now under construction, opens new regions for development in the upper Amazon valley. On concrete piers (right) the 2,000-ft. Aguaytia bridge stretches from low-lying jungle land (below) to provide the final highway link from Lima to Pucallpa that will open up rich farm lands to Peru's arid coastal cities. Supplies, including oil, can also travel by boat from Pucallpa to Manaos on the Amazon, to complete the cross-continent network.



## CANADA



### FOR A PERIOD OF READJUSTMENT

Heading up a fleet of 700 to be built by U.S. companies for France's impoverished rail system, the 125-ton "Liberation" (above) symbolizes the flood of foreign business which will help ease the labor pains of war-order cutbacks, strengthen prospects of a postwar industrial boom (page 9). The locomotive is the product of Lima Locomotive Works which has orders for 179 similar units; the rest will be built by Baldwin and American Locomotive plants.

adequate to cope with the demand for air-travel facilities.

More planes and bigger airports with longer runways are needed to enable Brazil to handle the big international air traffic which is expected to develop in the next few years.

### Roads for Turkey

**U. S. engineers to be hired in 20-year program involving 111,000 miles of road. Funds on hand to pay for U. S. equipment.**

U. S. engineers and manufacturers of road-building equipment may share in a big new \$1,000,000,000, 20-year highway program just announced by the Turkish government.

• **A Two-Phase Program**—After four months' study of U. S. highways, visiting Turkish officials revealed as they were about to depart for home this week that Ankara has a two-phase highway program which rivals in boldness the vast electrification plan announced only a few weeks ago (BW—Jul. 28 '45, p114). This plan calls for 29 new power stations, nearly half of which are scheduled to be completed by 1950 to provide the basis for speedy industrialization of the country.

The highway program is so extensive that it will be undertaken as two ten-

year plans. Between now and 1955, the Turks plan to build nearly 16,000 mi. of new primary roads linking such ports as Istanbul, Smyrna, and Mersin with industrial centers in the interior of the country. And over the next 20 years, Turkey expects to build or rebuild nearly 95,000 mi. of roads, including a vast new system of secondary roads.

• **U. S. Engineers Wanted**—As a result of the recent survey trip, Turkish officials hope to employ U. S. highway engineers to help blueprint the new program and, in some cases, to place contracts with U. S. engineering firms to handle important stretches of heavy-duty highway which must be completed in a minimum of time. Much of this special construction will be in the neighborhood of Istanbul and Ankara. As far as possible, participating American firms will be expected to associate themselves with Turkish contractors, the U. S. firm putting its share of capital into the venture in the form of construction equipment.

• **Funds Available**—Ankara has large dollar balances in the U. S. as a result of important Allied expenditures in Turkey during the war at a time when it was impossible, because of wartime restrictions, for the Turks to spend more than a fraction of the accumulation for imported industrial supplies.

Turkey is counting on these balances to cover their initial purchases and technical assistance, and on increasing exports to pay for future supplies.

### Paper Expansion

Deals signed by Ontario with U. S. and Canadian firms call for \$50,000,000 outlay on new and enlarged mills.

OTTAWA—Agreements calling for expenditure of nearly \$50,000,000 have been signed between the Ontario government and Canadian and U. S. newsprint companies for the establishment and extension of pulp and paper enterprises on the north shore of Lake Superior.

Three new mills are already under construction and an American company is reported to be considering the erection of a \$10,000,000 mill to be located at the lower end of the Long Lac diversion.

• **Work Under Way**—Projects actually moving are:

Red Rock, where the Brompton Pulp & Paper Co. has taken over a mill which failed after expenditure of several million dollars a few years ago. Brompton plans to spend \$4,000,000 to complete the project, with production to begin late this year.

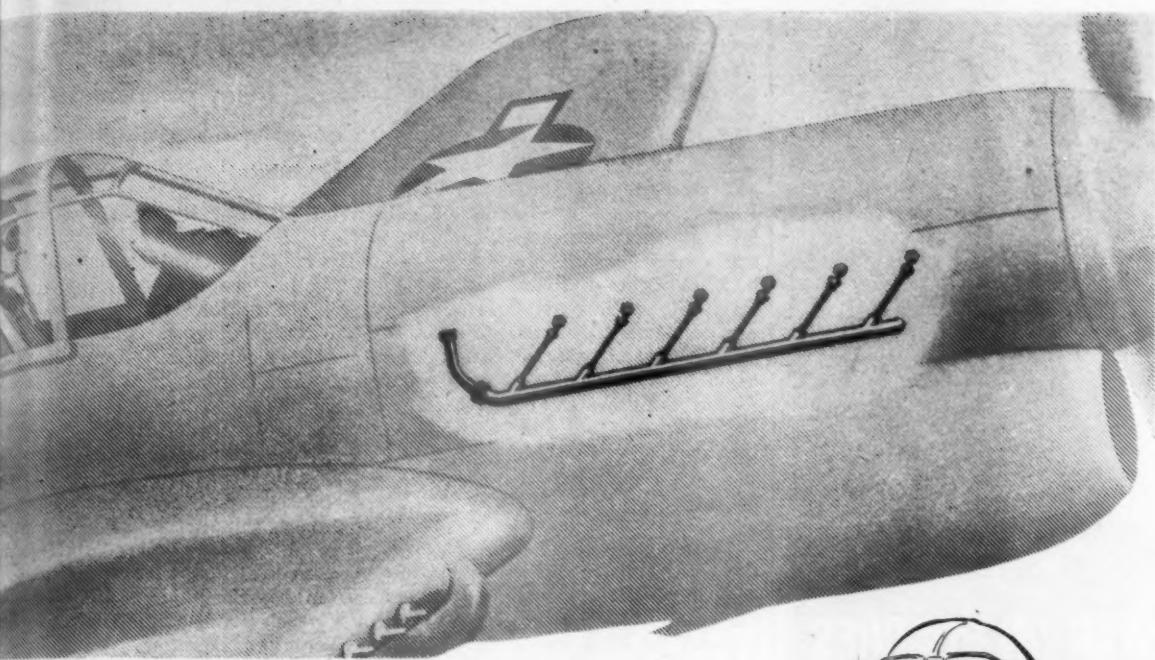
Peninsula, where Marathon Pulp &

### Billboard Battle in Chile

SANTIAGO, CHILE—In a bold move which local advertisers fear may become precedent-setting in other Latin-American countries, the Chilean government has passed an ordinance taxing all outdoor advertising at an annual rate of 600 pesos (\$20) per square meter.

Alarmed and indignant, the country's biggest advertisers immediately formed an association and launched a campaign of protest in the daily press against the new ordinance.

Key members of the association are Coca-Cola, Orange Crush, R.C.A. Victor, and Sydney Ross Co. (Sterling Products). Object is to get the tax removed, or at least drastically reduced. At the projected rate and on the current volume of outdoor advertising, the tax could cut profits on Chilean operations of the larger companies as much as \$30,000 or \$50,000 a year.



## keeping an Ignition System

### off the Air . . . . .



EVER hear somebody's electric shaver over your radio? That's the kind of noise, many times multiplied, a pilot would hear in his radio earphones if the ignition wiring on his plane were not properly shielded.

So, to prevent an ignition system from becoming a broadcaster . . . interfering with clear radio reception, the complete ignition harness is enclosed in a sheath of braided copper alloy conduit.

The braided shielding must withstand a wide range of temperature changes, from sub-zero to intense heat . . . the severe vibration of high-powered aviation engines . . . the terrific beating of tremendous wind pressures. Then, too, the higher the altitude the more difficult it becomes to prevent the leakage of electrical current. And to further complicate the problem, radio equip-

ment is being constantly improved for greater sensitivity.

Braiding copper alloy wire for this important shielding function must be a precision job of fabrication to meet the exceedingly high specifications for Army and Navy planes.

Here at National-Standard we have developed methods of producing a uniform high quality of wire braided flexible conduit to successfully meet the extreme service requirements of some of America's fastest flying planes.

Today we have machinery available to braid steel, brass, copper, stainless steel, and monel metal in tubular lengths from  $\frac{1}{16}$ " to 16" in diameter. Let National-Standard's unique manufacturing facilities and 38 years' experience help you with your wire and wire fabricating problems.



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## WAR ON ROACHES with the **WHIZOOKA!**



This sensational roach gun comes fully loaded with a powerful new insecticide ready to use anywhere!

Just aim the WHIZOOKA and shoot a cloud of deadly dust into cracks and runways wherever you have roaches or other insect pests. Kills fast—faster than Sodium Fluoride . . . retains its deadly properties longer than Pyrethrum.

The WHIZOOKA means sure, quick death to roaches, ants, silverfish, bed-bugs! But it's harmless to animals and human beings. Beat the bugs! Order the WHIZOOKA from your WHIZ distributor. *Industrial Division, R. M. Hollingshead Corporation, Camden, N. J.; Toronto, Canada.*



**WHIZOOKA**  
*Roach Gun*

A PRODUCT OF *Hollingshead*  
LEADER IN MAINTENANCE CHEMICALS

Paper Co. has begun construction of a mill and townsite on the lake shore. Capital outlay is expected to top \$10,000,000, with production starting in 1946.

Espanola, former ghost town where Kalamazoo Vegetable Parchment Co. has taken over the old Abitibi Pulp & Paper Co. plant. A \$10,000,000 rehabilitation and construction program is under way.

• Other Plans—Further west in the Rainy River area the Minnesota & Ontario Paper Co. is planning postwar plant extensions. Other interests likely to be moving on new projects soon are Abitibi, the Provincial Paper Co., Great Lakes Paper Co., and Great Lakes Lumber Co.

### BOMB IS U. S. SECRET

Canada and Great Britain share with the United States the scientific knowledge on which the war's best-kept secret, the atomic bomb (page 21), is based, but only the U. S. knows the details of the bomb's manufacture. The job of actually building the bomb was left to the American scientists and engineers, and neither ally has asked to be let in on the secret of the procedure that was worked out.

## U. S. Branches

Many companies showing eagerness to establish plants Dominion or to expand units which they already have there

TORONTO—Since the end of the war first loomed into sight, there has been a rush of U. S. companies seeking to establish branch plants in Canada, make manufacturing agreements with Dominion firms, or to enlarge subsidiaries already operating on the Canadian side of the border.

• Wave of Inquiries—With the prospect now that construction restrictions will be eased rapidly, particularly where new projects will offer tempting employment to laid-off war workers and returning veterans, a new wave of inquiries from south of the border is now beginning to reach popular industrial centers like Toronto, Hamilton, Windsor, Kingston, and Montreal.

Some of these queries represent new capital seeking investment in Canada. Others come from established interests which seek to reinvest accumulated profits on Dominion operations rather than

## Canadian Fur Trade Has Profitable Year

TORONTO—August sales, with their emphasis on fur coats, are providing Canada with a fitting climax to one of the biggest years in the long history of the Dominion's profitable fur business.

• Peak Prices Paid—In addition to booming sales by trappers and fur farmers as well as retailers, the trade is profiting from peak prices. Wild mink pelts have been selling for as much as \$67.50, with \$42 for ranch mink. A mink coat this year with top-quality wild mink pelts would cost about \$10,000, taking into consideration all manufacturing costs as well as the government's 25% luxury tax.

Auction sales at Montreal recently featured wild mink prices at 40% over prices paid only last spring. Ranch mink is up 25%. Even beaver and muskrat are from 15% to 25% higher than during the spring.

• Production Increases—While demand for furs has increased during the war, the number of animals trapped or raised on farms has also increased.

A government survey over the last ten years shows that the number of beaver pelts sold has increased from 50,175 to 126,000, with the average price jumping from \$8.03 per pelt to \$35.37. Muskrats entering the market over the same period have increased in number from 1,630,231 worth \$1.18 a pelt, to 1,980,893 at \$2.26.

• But Imports Grow—Though Canada is one of the world's principal fur producing countries, the Dominion imports large quantities of furs. Last year's foreign purchases ran to \$9,137,778 compared with a bare \$4,000,000 in 1938. Favorite imports are Persian lamb, rabbit, squirrel, and raccoon.

Canada last year exported furs worth \$26,203,000, a jump of about \$6,000,000 from 1943. Most of the fur buyers at auctions for export come from New York, with a growing number from Mexico and Latin-American countries.

The value of all furs produced in Canada has more than doubled since the start of the war with the total in 1944 topping \$32,363,000.

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British Columbia: Pacific Mills, Ltd.; International Pulpwood Supply Co.; Standard Oil of British Columbia. Saskatchewan: Swift Canadian Co.,

jected construction cost exceeds \$1,000,000.

## CHANGE BARRIER STAYS

OTTAWA—Tight British foreign exchange restrictions are expected to prevent any large movement of British capital to Canada for investment in industrial enterprises, new or existing. Terms of the recent sale of the government-owned Victory Aircraft plant at Willowdale, Ontario, to the Hawker-Siddeley interests of Great Britain, have not been announced, but it is presumed Dominion government will be paid a period of years out of profits.

The wartime British exchange controls, among the tightest in the world, will prove a convenient instrument for the new Labor government to use in blocking any flight of British business. It is assumed in Ottawa is that they will be continued indefinitely by the new Labor government to avoid the flight of nervous investment capital during the early period of industrial nationalization.

In the hope that the virtual British control on the export of capital might be ended, some British interests had their offices on Canada. One group had planned opening a chain of retail furniture stores, starting with one in Toronto.

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## Atlas Corporation

### Dividend on Common Stock

NOTICE IS HEREBY GIVEN that a dividend of 25¢ per share has been declared on the Common Stock of Atlas Corporation, payable September 10, 1945, to holders of such stock of record at the close of business August 15, 1945.

### Dividend No. 36 on 6% Preferred Stock

NOTICE IS HEREBY GIVEN that a dividend of 75¢ per share for the quarter ending August 31, 1945, has been declared on the 6% Preferred Stock of Atlas Corporation, payable September 1, 1945, to holders of such stock of record at the close of business August 15, 1945.

WALTER A. PETERSON, Treasurer  
July 31, 1945.

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\* CERTIFIED PUBLIC accountant desires responsible executive position with reputable firm with post-war future. More than fifteen years of diversified industrial and management experience. Familiar with all phases of accounting; taxes, budgeting and administrative. Box 449.

# THE MARKETS

(FINANCE SECTION—PAGE 7)

After hearing President Truman's Tuesday night victory message, most of the nation's main security and commodity markets followed the lead of the New York Stock Exchange and promptly announced that their trading facilities would not be available for transactions on either Wednesday or Thursday.

• **No Emergency Measure**—This action, however, represented no emergency measure hastily designed to meet any critical situation brought on by this week's events. Instead, the two-day holiday decree was very definitely a "legitimate" observance of Japan's capitulation. Earlier in the week, the markets had not once lost their poise even though some natural tension had been displayed as events neared their climax.

Monday's trading session, when the Big Board's stock and bond markets disclosed losses ranging up to five points in many cases, provided the New York exchange with its most nervous period.

• **What Happened**—Causing much of the trouble that day was persistent selling of the "nervous Nelly" type and a distinct absence of supporting bids, a condition that can always be counted on to turn up whenever it is obvious that momentous events are shaping up. Likewise noticeable was a considerable amount of switching as "professionals" adjusted their trading accounts to ride out any storm that might be brewing.

Most of Monday's selling, obviously, was concentrated in the so-called "war stocks." Particularly vulnerable were the rail shares. Even such traditional bellwethers as Union Pacific, Norfolk & Western, and Atchison disclosed drops at times ranging from \$3 to \$5.

The rails, however, weren't the only

group to suffer on Monday. Shipping shares were almost as vulnerable. Aircraft manufacturing stocks were likewise in supply. In the steel division of the list, some leaders had to give up as much as \$1.50 before the session had ended and General Motors and Chrysler suffered about the same among the motor cars.

• **So, Too, With Bonds**—In the bond market, the same pattern was followed. Few rail issues escaped unscathed and particularly sharp losses, ranging up to four points, were widely scattered among the bonds of the marginal and bank rail carriers.

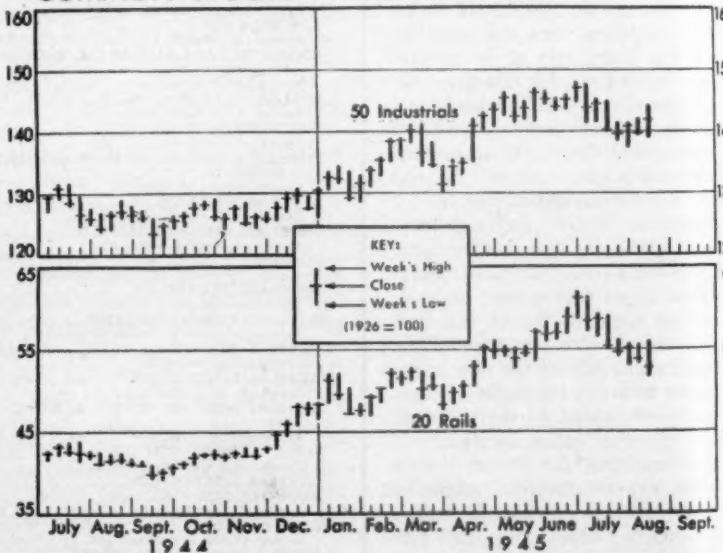
For various reasons, however, Monday's performance aroused little apprehension this week in the Street's bulls' group (page 79). Volume, for example, failed to reach the million-share mark. Many prices had moved above their levels of the day before the market closed, and, what was more important, the selling wave had no follow-through. Instead, on Tuesday, the market had shed its previous nervous tension and appeared to have settled down with some confidence to await the Japanese acceptance of peace terms.

### Security Price Averages

	This Week	Week Ago	Month Ago	Year Ago
Stocks				
Industrial	141.9	139.8	140.2	120.0
Railroad	52.9	53.8	55.3	41.0
Utility	69.7	69.4	70.2	53.0
Bonds				
Industrial	123.4	122.3	122.2	120.0
Railroad	115.6	115.0	114.9	107.0
Utility	117.2	115.4	116.1	110.0

Data: Standard & Poor's Corp.

### COMMON STOCKS—A WEEKLY RECORD



# THE TRADING POST

PAGE 7

## Ships Away

The atomic bomb stirred the imagination of everyone. Not least stirred a correspondent who, because he was around in the uranium industry, was able to report the whole tremendous scientific and production project more than a year ago. His report, of course, went into the editorial safe under a censorship label. Now, among paragraphs of reflective postscript prompted by the blast heard round the world at Hiroshima, he writes:

"Little appears in the atomic economics and politics are out of the window. There won't even be any examples about 'private enterprise' in relation to man's thing. It cannot be controlled by any group of people for their own profit. At step, the state, dislike the thought as may, becomes the only possible trustee. Instead, it is this tremendous power and, therefore, assumes an importance never before known in history."

We must all become more thoughtful and sensible citizens, working harder and consecutively at the job of citizenship. We do not know what may come out of this way of changes in politics, but at the present system of allowing politicians to hold the people down to a choice between two second-rate nominees for a top office is no longer adequate. On the one side we have the men who accomplished this wonder; on the political side we have well, the spectacle of a Bilbo as one of the political trustees of a world with atomic power loose in it is entirely sickening.

On the side of mechanics, the most impressive thing to me is the long development must still take place before atomic energy becomes a dependable source of power. I note that people are talking in newspapers about atomic-powered autos. I remember that one witness of the Mexico test of the atomic bomb reported that the sand under the tower was vaporized in addition to the vaporizing of the base of the tower itself. No materials or structures within many years could confine such a development adequately for power purposes. The nearest one can now come to picturing a practicable power plant is as something like a mountain, restrained by many feet of granite or gneiss, with an interior chamber bounded by lead and operated by remote control from many feet, or even miles,

show, science now rules the roost and lives. We went to bed Aug. 5 in George Washington's time; we woke up on Aug. 6 the first citizens of a truly modern world. And it's just possible that our tenure of capacity may be one of comparatively short years.

\* \* \*

From a Washington office comes a vision born of political experience: the atomic bomb means the end of

democracy because in the next war the first attack will be the last.

The atomic projectile will take the form of an ocean-spanning rocket. Our future enemies will develop them, build the necessary launching sites in secret and let the rockets go when they please.

The United States can't do that. Congress won't put up the money, in the first place; in the second, it's not likely that our plans could be kept secret if we did get them by the legislators.

## Farm Prices

A farmer reader thinks that U.S. farmers are missing a significant warning. He writes:

In the face of the loud clamor for higher prices that comes from the heads of farm organizations and the spokesmen of the livestock producers, Clarence A. Dykstra, as chairman of the executive committee of the Assn. of Land-Grant Colleges, has just released a statement against any such increases, and also against higher wage levels.

An association committee on postwar agricultural policy headed by Noble Clark, dean of the College of Agriculture of the University of Wisconsin, in a report on which Dykstra based his statement, concluded that:

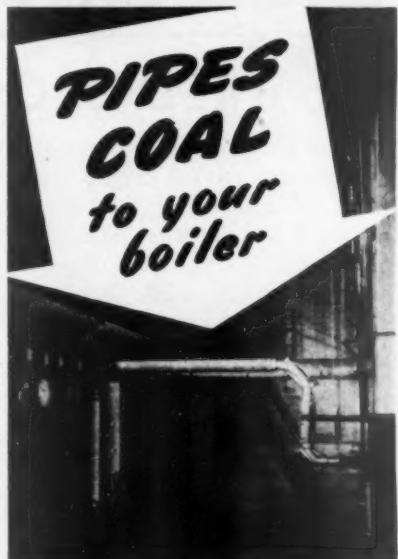
"A runaway price situation while the pressure for civilian goods and services continues during the early postwar period would spell disaster for many farmers and their families."

This committee, made up of eighteen of the heads of the leading agricultural colleges of the country, believes that any decided rise in prices and wages during this period would add greatly to farm costs. The committee sees shortages of farm products likely to be replaced by surpluses when the demands due to the war taper off. It is convinced that, if prices for what the farmer has to sell get out of hand in the meantime, they will then nosedive, while many farm expenses will stay up.

Farm land prices were singled out for special emphasis by the committee, with the statement that lifting of price controls before the danger of inflation is past would open the door to a speculative boom in farm land; that this would lead to a piling up of mortgage debts which, in many cases, would be out of line with long-run farm earnings.

Professional farm leaders paid little attention to a report of the committee last year in which a high postwar level of industrial wages and full employment were urged as essential to farm prosperity. The agricultural press, committee members say privately, also ignored its recommendations. In the light of this experience, and of the present strenuous efforts of heads of some of the farm organizations to get the government to permit higher prices for farm products, the committee anticipates a similar ignoring of current recommendations that the price line be held.

## IRON FIREMAN



- saves fuel

- saves labor

IRON FIREMAN stokers save labor, releasing critical manpower for other work. They also save fuel. Engineered to the specific firing requirements of the particular boiler and its particular job, Iron Fireman stokers automatically feed exactly the right amount of coal to produce just the amount of steam needed, when it is needed.

### Answer to Labor Shortage

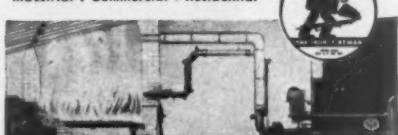
Richmond Professional Inst., College of William and Mary, Richmond, Va., says: "Iron Fireman has enabled us to meet the labor situation during the war. If we had not installed these stokers I do not believe we could have kept our buildings heated during the present period of labor scarcity."

Iron Fireman nationwide engineering service will survey your boiler room without charge and render you a report. Ask for this service and learn what Iron Fireman can accomplish for you in your heating or power plant. Write: Iron Fireman Mfg. Company, 3733 West 106th Street, Cleveland 11, Ohio. Pioneer and Leader in its field.

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# THE TREND

## ON THE DAY OF VICTORY

The American people have celebrated their victory with the wild joy and the deep solemnity that were to have been expected of their great moment in history. But, what is more, they have, by and large, recognized their final V-Day as a new moment in history, differing from all those in which their forebears celebrated the triumphs ending wars. This recognition has grown out of the fast-breaking series of events that have marked the windup of this war, that have marked it as the start of a new era as well as the close of an old one.

• It would, indeed, be difficult not to see this day of victory as the opening of the first door of three by which we shall enter into a future that must differ widely from the past. For the immediate days ahead, we have burst a lock and plunged through into the full challenge of the task of reconverting our land to peaceful production. In our hands, we now hold the key to a door that opens to a further great change when we, with our Allies, shall remake the political and economic map of the world. And, further ahead, lies the fateful entrance to a new life under the providence of science—a new technological and industrial age in which our knowledge of the infinitely small atom may make us infinitely great.

Thus this V-Day strikes a note of change, of newness, and carries an unprecedented promise of vast potentials for the peacetime that it ushers in. And we must attune ourselves to its call for action and decision.

• Right now, at home, there is an end of the preparation and the postponement, the easing and the tightening that have marked the gradual transition from all-out worldwide war to a half-world war that was inevitably headed toward victory and its tasks of reconstruction. And it is reassuring that the first phase of the future into which we now enter should open up before us so bright a perspective. As we tackle the task of industrial reconversion—our initial job—we find that the country, and business particularly, seem better prepared to make a speedy change-over than we had thought. The first actual postwar outlook shows peak peacetime levels in sight by Christmas, and new postwar records on the horizon for the new year (page 15).

Perhaps, when we actually get to it, when the new political and economic framework for the world has been fashioned from the peace settlements for Europe, initiated at Potsdam, and those for Asia that are still to be hammered out, we shall again find that the necessary readjustments can be made more easily than we had thought probable. But, certainly, just as industrial reconversion confronts us with a sharper economic change than we have ever encountered, the working out of new political and economic ways for the world faces us with

a vastly larger problem than our history books have ever recorded.

What was the Peace of Westphalia or that of Vienna beside the peace that we must build from the beginning at Potsdam and Tokyo? Never have we undertaken decree so drastically different an economic life for a nation as we have for Germany—and will for Japan—with all the repercussions that this must start in Europe, Asia, and throughout the whole world, including the great land within our own borders. Rarely have we seen so radical a redivision of politico-economic spheres as that now occurring or soon to occur in eastern Europe and northern Asia as part of Russia's emergence into a new world role. Never has the United States committed itself so far to new international economic arrangements and directions in the management and world-coordination of such matters as currency, tariffs, investments, and trade. And never has this nation occupied in peace a central position on the world stage.

• Finally, from now on we must stand up to the enormous possibilities that the research of wartime has brought into sight in the field of scientific vision. Already, of course, the atomic bomb has altered the military and strategic patterns of the war. Though atomic energy is a revolutionizing factor in industry is obviously still very far from reality, the possibility that it will eventually become that is well within the theoretical limits of science. The exploration of the atom now presents the imagination something better than a fantasy in a revealed vision of an almost limitlessly enlarged command over the constructive—as well as the destructive forces of nature. The leaders of our forays among the electrons beckon us onward to dreams of a hitherto unconceived capacity for sensitive and automatic control over the power that we may some day turn to the service of man's purposes. We are well started on a long and fateful journey, and each step of it will have vast implications for man and his ways.

• Never before have we had so crying a cause to re-examine our purposes and our ways. We stand at the first of the three doors opening to man's future, bearing not only the plume of a great victory but the burden of a great failure, and the name of that failure is Death. The dead of this six-year war have written the record of pitiful lines all across the earth's wracked acres. War is failure, complete failure, and, if the right is now victorious, that does not redeem our failure; it is only a chance for redemption. Out of a victory by the atomic bomb that is, just as surely, our chance for utter disaster. We must find the purposes and the ways that, at last, lead to peace.

ECONOMICS

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